DOCTOR OF PHILOSOPHY

The Architecture of Analogy

An Inquiry into Aldo Rossi's Theory of the City, the Discipline, the Type, and the Analogue

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University of Dundee

THE ARCHITECTURE OF ANALOGY

CAMERON MCEWAN

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AN INQUIRY INTO ALDO ROSSI'S THEORY OF THE CITY, THE DISCIPLINE, THE TYPE, AND THE ANALOGUE

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TABLE OF CONTENTS

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Above all, this work is for my parents and my brother.

I, Cameron McEwan, hereby certify that I am the author of this thesis; that this thesis has been composed, written, and produced by me; that all references cited have been consulted by me; that the work undertaken to produce this thesis, and of which the thesis is a record, has been carried out by me; and that this thesis has not been previously accepted for a higher degree.

ABSTRACT

The aim of this dissertation is to put forward conceptual frameworks to inquire into and update the following theoretical categories of Aldo Rossi's architectural production: the city as an artefact, the idea of type, architectural autonomy, history understood as collective imagination, and the concept of the analogical city. On one hand, our inquiry puts forward a close reading of particular aspects of Rossi's formal and theoretical production, examining Rossi's work as well as other commentators on Rossi's work. On the other, the inquiry is supported by a selective reading of major figures as well as canonical theories and projects from the discipline of architecture. In both cases detailed readings of texts, drawings, built and unbuilt work is undertaken to extrapolate the theoretical categories as well as key descriptive characteristics. These develop the conceptual frameworks which are diagrams that visualise the relations between categories and characteristics.

Revisiting Rossi helps us re-engage with architecture as a discipline that simultaneously produces its own historical-formal body of knowledge while co-determining the wider social imagination. The discipline has, in the last decades, become weakened by the continuing proliferation of unique architecture-objects and the rejection of architecture's fixed terms of reference. By discussing the category of discipline, we point to future work on how architecture negotiates its formal condition and its societal role. We re-learn that architecture is an instrument that puts forward singular alternative ways of living – formal possibilities – and critical interpretations of existing conditions – theoretical alternatives.

The primary method of inquiry is visual and literary montage. Simultaneously analytic and synthetic, montage provides a way to isolate theoretical categories and formal examples from the mass of material, then produce new insight by making connections between things otherwise different.

1.
INTRODUCTION
CRISES OF IMAGINATION

Discipline, Autonomy, and the Lesson of Rossi

The Repositioning of Rossi

Thesis Outline

Without desire no certainty remains, and the imagination itself is reduced to a commodity.

Aldo Rossi, *A Scientific Autobiography*, 1981.[1]

With the fading away of the dream of knowledge as a means to power, the constant struggle between the analysis and its objects - their irreducible tension - remains. Precisely this tension is "productive:" the historical "project" is always the "project of a crisis."

Manfredo Tafuri, *The Sphere and the Labyrinth*, 1980.[2]

Producing and project are joint terms representing, in our language, a single family. The project is understood as intrinsically productive: it elaborates models of production.

Massimo Cacciari, *Project*, 1981.[3]

In moments of crisis, the major crises of the past are suddenly remembered. The "Dot-com" crash of 2000-2001 was compared to the Wall Street Stock Exchange crash of 1929.[4] During the 2007-2008 global financial crisis commentators recalled the transition from Fordism to post-Fordism in the 1960s and 1970s.[5] For the media theorist Franco Berardi these economic crises are symptoms of our "crisis of social imagination," as he puts it.[6] As Lazzarato has recently observed, we are in the paradoxical position of being told, on one hand, the crisis is our own fault because we retire too early, we seek too much state welfare, we consume too much public services and we are guilty of living beyond our means.[7] On the other hand, we are told exactly the opposite, that we have no responsibilities, we deserve everything and it is our duty to compulsively consume. We are subjectified by the conflict of guilt and innocence, our expectations lowered to degree zero. Today's weak and diffuse modernity is an extension of 1980s "postmodern" thinking, 1990s "neomodern" exuberance, mixed with a continuing neoliberal worldview that has resulted in architecture's withdrawal from disciplinary and social debate, architecture's abandonment to, and capitulation by capital. Symptomatic of this are the polarised aesthetics of on one hand, the production of exuberant forms, and on the other, the recent effort by architects to aestheticise the authoritarian tone of economic austerity.[8] Despairingly, we normalise the condition of scarcity and precariously live on, rehearsing these crises. Within this crisis of architectural and social imagination, we should remember the intense debate about architecture's disciplinary significance during the 1970s. However, before we come to this, let us briefly reflect on our current social and cultural condition.

In *Capital and Language* Christian Marazzi chronicles the transition from Fordist to post-Fordist production to read the role of the linguistic function within post-Fordism.[9] Marazzi's line of thinking is developed further in his recent book *The Violence of Financial Capitalism*, which analyses the 2007-2008 global financial crisis, its causes and the aftermath.[10] For Marazzi this crisis, which is still current, is an intensification of a crisis that, in Europe at least, began in the 1970s transition from the Fordist mode of production to post-Fordism. As Berardi has said, the 1970s was the end of the era of industrial capitalism and the beginning of a new age.[11] This new mode of production changed both the nature of work and the production of goods. Labour processes became automatised, de-localised, and the speculative dimension of market forces became important. Following on from this, production today is not industrial, but cognitive. Production relies on the human linguistic-cognitive faculty so is language, communication, exchange, cooperation, the external character of our generic imaginative potential. Hence, the transition from Fordism to post-Fordism can be summarised as the transition from industrial capitalism to cognitive capitalism, or as Marazzi says in the following passage "biocapitalism:"

> Starting with the crisis of Fordism in the 1970s, economic bubbles should thus be interpreted as moments of crisis within a long-term process of "capitalist colonization" of the sphere of circulation. This is a global process, that is it explains globalization as a process of subsuming growing quotas of global and local socio-economic peripheries in accordance with the logic of financial (bio)capitalism.[12]

While Fordism separated work and life, in post-Fordism such an opposition is overcome. As we have said, it is the following common human faculties that become important: a disposition for learning, our ability to think abstractly, to correlate ideas, to self-reflect, our imagination, which are fused within the notion of work. In this mode, the private sphere of cognition becomes increasingly public and economically productive. Hence knowledge and imagination are productive forces and articulated through language.[13] A language that circulates around the globe through human communication, the transmission of knowledge by linguistic interaction, and intellectual activity. In our post-Ford, neoliberal age, this techno-linguistic ethos penetrates every space of our daily life and every aspect of the collective imagination. The distinction between life and work is irrecognisable because the life of our mind is constantly at work. We are overcome by information, intensively producing and continuously consuming everything from books, images, and exhibitions, to blogs, brands, and daily flows of digital traffic. Hence, the most advanced forms of economic production are the production of images and ideas, assessed against the performance of economic indexes, the authority of statistics, and the managerial practice of bureaucracy. As post-fordism conjoins life and work – cognition and economy – then it is crucial to recognise the reciprocal but problematic relation. Especially so if any fracturing or superimposing of the links between life, the collective imagination, and work potentially leads to pathologies such as fear, anxiety, panic, depression, the anticipation of collapse, and the precarious condition of current urban life. While in post-Fordism our intellectual and emotional condition is constantly at work within the endless array of material and immaterial production, Sigfried Giedion, writing in the 1960s, noted the separation of this condition.

In *Space, Time and Architecture* Giedion writes of the split between "thinking" and "feeling" in modern life, and that this was paralleled in the methods employed in science and art. While Giedion attempts to dissolve the opposition, he proposes the "split personality" as symptomatic of the uneven and unbalanced development of the early twentieth-century.[14] Updating his thinking for the 1962 edition of *Space, Time and Architecture* Giedion briefly reflects on the characteristics of this next period. He notes the following: the loss of human scale, the increase of urban population, and the sculptural tendency in

1. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), p. 72.

2. Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-Gardes and Architecture from Piranesi to the 1970s*, trans. by Pellegrino d'Acierno and Robert Connolly (Cambridge, Mass.: MIT Press, 1990), p. 3. First published in Italy in 1980 under the title *La sfera e il labirinto.*

3. Massimo Cacciari, 'Project' (1981), in *The Unpolitical: On the Radical Critique of Political Reason*, ed. by Alessandro Carrera, trans. by Massimo Verdicchio (New York: Fordham University Press, 2009), pp. 122–145, (p. 122).

4. See the following BBC articles: Rory Cellan-Jones, 'Dot.com to Dot.bomb', *BBC*, 2000, section Review <http://news.bbc.co.uk/1/hi/in_depth/business/2000/review/1069169.stm> [accessed 3 December 2013]; 'Record Stock Market Falls in 2008', *BBC*, 2008, section Business <http://news.bbc.co.uk/1/hi/business/7805644.stm> [accessed 3 December 2013]; 'World Economy "Weakest Since 30s"', *BBC*, 2008, section Business <http://news.bbc.co.uk/1/hi/business/7757506.stm> [accessed 3 December 2013]. Also refer Mario Carpo, *The Alphabet and the Algorithm* (Cambridge, Mass.: MIT Press, 2011), p. 143. Carpo reminds us that the NASDAQ lost 78 percent of its value between March 10, 2000, and October 9, 2002, down from 5048 to 1114. See also Christian Marazzi, *Capital and Language: From the New Economy to the War Economy*, trans. by Gregory Conti (Los Angeles, CA: Semiotext(e), 2008). First published in Italy in 2002.

5. See for example Maurizio Lazzarato, *The Making of the Indebted Man: Essay on the Neoliberal Condition*, trans. by Joshua David Jordan (Los Angeles, Calif: Semiotext(e), 2012); Christian Marazzi, *The Violence of Financial Capitalism*, trans. by Kristina Lebedeva and Jason Francis McGimsey (Los Angeles; Cambridge, MA: Semiotext(e); MIT Press, 2011).

6. Franco Berardi, *The Uprising: On Poetry and Finance* (Los Angeles: Semiotext(e), 2012), p. 7. Also see pp. 78-80.

7. See Lazzarato, *The Making of the Indebted Man*, pp. 169-170.

8. For a varied discussion on the themes of architecture, scarcity, and austerity see the following: Pier Vittorio Aureli, *Less Is Enough: On Architecture and Asceticism* (Amazon: Strelka Press, 2013); Jon Goodbun, Jeremy Till and Deljana Iossifova, eds., *Scarcity: Architecture in an Age of Depleting Resources* (London: Architectural Design, 2012); Jeremy Till, 'Scarcity Contra Austerity', *Places*, 2012 <http://places.designobserver.com/feature/scarcity-contra-austerity/35638/> [accessed 8 December 2013]. See also Brett Neilson and Ned Rossiter, 'Precarity as a Political Concept, Or, Fordism as Exception', *Theory, Culture & Society*, 25 (2008), 51–72.

9. Christian Marazzi, *Capital and Language: From the New Economy to the War Economy*, trans. by Gregory Conti (Los Angeles, CA: Semiotext(e), 2008).

10. Christian Marazzi, *The Violence of Financial Capitalism*, trans. by Kristina Lebedeva and Jason Francis McGimsey (Los Angeles; Cambridge, MA: Semiotext(e); MIT Press, 2011).

11. Berardi, *The Uprising*, p. 94.

12. Marazzi, *The Violence of Financial Capitalism*, p. 64.

13. See for example Christian Marazzi, *Capital and Affects: The Politics of the Language Economy*, trans. by Giuseppina Mecchia (Los Angeles, CA: Semiotext(e), 2011), first published in 1994; Christian Marazzi, *Capital and Language*, 2008; Paolo Virno, *A Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*, trans. by Isabella Bertoletti, James Cascaito, and Andrea Casson (Los Angeles, CA: Semiotext(e), 2004).

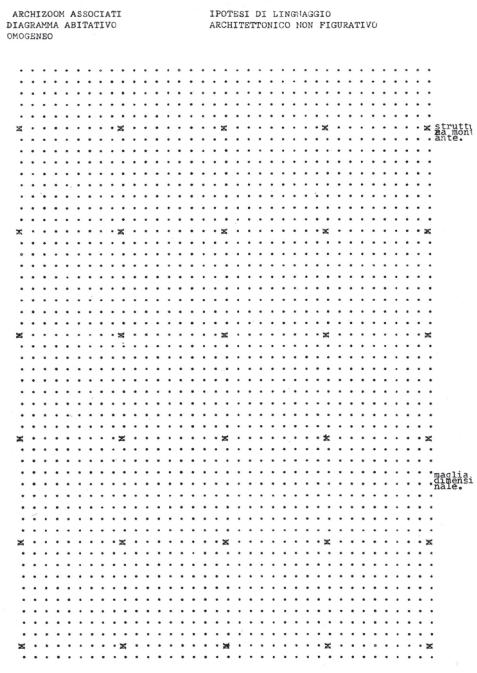
14. Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition* (Cambridge, Mass.: Harvard University Press, 1967), p. 14. First published in 1941.

1.1.

1.2.

1.3.

1.4.



1.5.

1.1. Roberto Rossellini, film still from Paisà, 1946, shot on location in Florence after the bombings of the war.
1.2. Ludovico Quaroni and Mario Ridolfi, Tiburtino housing, Rome (1949-54). Housing was the focus of postwar reconstruction ratified by legislation called "INA-Casa" in effect between 1949-1963. At Tiburtino, row houses, tenement blocks, and towers are arranged informally following the contours of the site and using "common" materials.
1.3. Luigi Carlo Daneri, Quartiere Forte Quezzi, Genoa (1956-61). Under the same legislation, the housing complex refers to the monumentality of Le Corbusier's work by contrast to the neo-realism of Quaroni and Ridolfi.
1.4. Michelangelo Antonioni Il deserto rosso (1964). Set in Ravenna during its period of de-industrialisation.
1.5. Andrea Branzi with Archizoom (1968). Typewritten diagram for No-Stop City. The refusal of figurative forms within a territory of exchange and information figures forth an architectural language of global urbanisation.

architecture, pointing to Le Corbusier's Ronchamp (1955) and Utzon's Sydney Opera House (1957) as examples.

"In the sixties a certain confusion exists in contemporary architecture," Giedion writes "... a kind of pause, even a kind of exhaustion. Everyone is aware of it. Fatigue is normally accompanied by uncertainty, what to do and where to go. Fatigue is the mother of indecision, opening the door to escapism, to superficialities of all kinds."[15] Giedion's statement could almost be a comment on our current modernity: after the architectural excess of the 1990s and 2000s, we are exhausted and arrive at the superficiality of "austerity" and the uncertainty of "precarity." It is interesting to compare Giedion's words with a statement by Rossi, in which Rossi writes the following: "The subjective element in architecture has the same tremendous importance it has in politics. Both architecture and politics can be and have to be understood as sciences, but their creative moment is based on decisional elements."[16] While Giedion points to the problem of indecision, Rossi, who maintained that Giedion's contribution to architecture was extraordinary, attempted to address what Giedion called for: an architectural tendency.[17] Without pandering to popular taste, Rossi aimed to re-found architecture as a discipline and provide architects looking for theoretical orientation with an articulate and authoritative voice that was neither absolute nor neutral.

In Italy in the 1960s and 1970s, Rossi and others undertook intensive and productive discussion about architecture as a discipline, the role of the architect within the social, cultural, and political sphere, and how the discipline of architecture interacts with these wider spheres. Architects published texts, put forward theoretical projects, and took part in competitions in order to contribute to public debate on the city. Rossi viewed his work as a contribution to both architecture as the production of knowledge as well as an intellectual effort to the political and social struggle of the city. The background to this discussion was the so called "economic miracle" of the 1950s and 1960s.[18] After the traumatic events that concluded World War II – the widespread destruction of human life and built fabric – the 1950s in Italy, as elsewhere, experienced major social, economic and political transformation. New technologies such as cybernetics, electronics, and building materials like plastics and resins were advanced.[19] Agricultural work reduced and those formerly employed looked for work in the major cities such as Naples, Bari and Palermo, in the South or moved North to the industrial cities of Turin, and Milan, via Rome and Ravenna. In war damaged areas, reconstruction and rehousing provided employment for workers, jobs for architects, and topics for critical debate in the architectural press. Historic centres were modified, and the city periphery expanded with unplanned housing quarters. Urban growth caused by the immigration of rural inhabitants to the city for employment served to expand industrial production and reorganised the relationship between city and countryside.[20] We can think of the rise of FIAT in Turin and Pirelli in Milan as examples.

Fig. 1.1.

Immigration to the city, combined with the destruction of the city from bombings led to housing shortages, infrastructural problems, and questions on how to manage the expansion of the city. On one hand, living standards increased, and material goods such as the TV, radio, and car were produced and consumed. On the other, with the rise of private pleasures and speculative building came the fall of the collective ethos of postwar reconstruction and social housing. Based on speculation and growth, industrial and corporate capitalism took over, which stagnated in the 1970s due to inflation, energy prices, workers strikes, and political instability.[21] It is interesting to note that films during this period provide a visual reflection on the condition of the city and general subjectivity. Films such as Antonioni's *Deserto Rosso* depicted the de-industrialisation of the city, its fragmentation, and the social division that this exposed. Fellini's *La Dolce Vita* and *8$^{1/2}$*, along with Antonioni's *La Notte* in varying ways showed the alienating effects of decadence, excess, and corruption, that capital afforded the rapidly urbanising society.[22]

Fig. 1.4.

Let us mention a few architectural projects that illustrate the above discussion. The 1949 housing legislation called "INA-Casa" was in effect until 1963, which subsidised housing nationwide.[23] One of its earliest experiments was the Tiburtino complex (1949-54) in Rome by Quaroni and Ridolfi. Row houses, apartment blocks and towers were composed in an irregular ensemble that followed the terrain of the site, attempting to reproduce the notion of traditional informality. Known as neo-realist after comparable trends in film and literature in which "real" is achieved through the supposedly unrhetorical authenticity of any given work, the Tiburtino housing used common materials including brick and plaster with tinted colouring, traditional roof coverings, and iron work for balconies. Within the framework of the same legislation but the opposite in formal language and architectural scale was Luigi Carlo Daneri's Forte Quezzi housing in Genoa (1956-61). Recognisable in form to Le Corbusier's 1931 Plan Obus for Algiers, Daneri put forward a linear and sinuous megastructure in the mountainside overlooking the city.

Fig. 1.2.

Fig. 1.3.

The problem of architectural language was crucial within these decades. On one hand, theoretical projects exaggerated the prevalent condition of city expansion and technological optimism. Archizoom, for instance, proposed the "No-Stop City" in 1968. A project that intentionally rejected the formal conventions of architecture and instead affirmed the technical, quantitative, and artificial reality of the city territory, "where the city corresponds to the dimension of the global market and the system."[24] On the other hand, architects intentionally opposed this condition. Rossi, for instance, put forward the need to understand the city as an artefact produced over time and from which urban and architectural types, with clearly defined formal characteristics, could oppose the prevalent condition of "open-form." Rossi argued that because the final constructed result of the city is architecture, which always manifests social, political, and economic forces, then it is the architect who is best positioned to study the city, assess its problems, and to intervene in the city through architectural form. His position countered the dominant neo-technological and megastructural graphic fantasies of Archigram, Kenzo Tange, and Yona Friedman in the 1960s as well as the populist and neo-romantic positions of BBPR and Ridolfi.[25] In putting forward his position, Rossi opened a debate on the discipline of architecture that was discussed throughout the 1960s and 1970s. A debate that withdrew in the 1980s and 1990s, but has in some sense resurfaced in the last ten years or so.

Fig. 1.5.

It is notable that in recent years Rossi's architectural production has been revisited by a number of major thinkers including Aureli, Hays, and Lobsinger.[26] At the same time, the disciplinary debates of the 1970s have been recalled by commentators including Biraghi, Colquhoun, Leach, Martin, and Vidler.[27] For these latter commentators, Rossi is not the focus of their analyses,

15. Giedion, *Space, Time and Architecture*, p. xxxii.

16. Aldo Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 14–25, (p. 16).

17. See for example Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), p. 46; and Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), p. 125.

18. See Paul Ginsborg, *A History of Contemporary Italy: Society and Politics 1943-1988* (London; New York: Penguin Books, 1990). In particular pp. 212-217.

19. For an extensive discussion of the period see Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century, 1914-1991* (London: Abacus, 1995).

20. See the following for social and political contexts: Joan Ockman, *Architecture Culture 1943-1968: A Documentary Anthology* (New York: Rizzoli, 1993), p. 20; Paul Ginsborg, *A History of Contemporary Italy: Society and Politics 1943-1988* (London; New York: Penguin Books, 1990); Robert Lumley and John Foot, eds., *Italian Cityscapes: Culture and Urban Change in Contemporary Italy* (Exeter, UK: University of Exeter Press, 2004).

21. See Ginsborg, *A History of Contemporary Italy*, pp. 351-354.

22. Michelangelo Antonioni, *Deserto Rosso* (Bfi, 1964); Michelangelo Antonioni, *La Notte* (Eureka, 1961); Federico Fellini, *La Dolce Vita* (Momentum, 1960); Federico Fellini, *8$^{1/2}$* (Cinecittà, 1963).

23. See Tafuri's discussion in Manfredo Tafuri, *History of Italian Architecture, 1944-1985*, trans. by Jessica Levine (Cambridge, Mass.: MIT Press, 1989), pp. 3-33, and pp. 41-48.

24. Andrea Branzi, *Weak and Diffuse Modernity: The World of Projects at the Beginning of the 21st Century* (Milan; London: Skira, 2006), p. 71.

25. See the various discussions in Manfredo Tafuri and Francesco Dal Co, *Modern Architecture Vol. 1* and *Vol. 2* trans. by Robert Erich Wolf (London: Faber & Faber/Electa, 1986). First published in 1976.

26. See in particular: Pier Vittorio Aureli, 'The Difficult Whole: Typology and the Singularity of the Urban Event in Aldo Rossi's Early Theoretical Work, 1953-1964', *Log*, ed. by Cynthia Davidson, 9 Winter/Spring (2007), 39–61; Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013); K. Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010); Mary Louise Lobsinger, 'The New Urban Scale in Italy: On Aldo Rossi's L'architettura Della Città', *Journal of Architectural Education*, 2006, 28–38. See also: Jean-Pierre Chupin, *Analogie et théorie en architecture: De la ville, de la ville et la conception, même* (Gollion: Infolio, 2010); Carsten Ruhl, *Magisches Denken - Monumentale Form: Aldo Rossi Und Die Architektur Des Bildes* (Wasmuth Ernst Verlag, 2013).

27. See in particular: Marco Biraghi, *Project of Crisis: Manfredo Tafuri and Contemporary Architecture*, trans. by Alta Price (Cambridge, Mass.: MIT Press, 2013); Alan Colquhoun, 'Lost Illusions', in *Collected Essays in Architectural Criticism* (London: Black Dog Publishing, 2009), pp. 321–324; Andrew Leach, *Manfredo Tafuri: Choosing History* (A & S Books, 2007); Reinhold Martin, *Utopia's Ghost: Architecture and Postmodernism, Again* (Minneapolis: University of Minnesota Press, 2010); Anthony Vidler, *Histories of the Immediate Present: Inventing Architectural Modernism* (Cambridge, Mass.: MIT Press, 2008). See also: Peter Eisenman, 'Foreword: [Bracket]ing History', in *Histories of the Immediate Present: Inventing Architectural Modernism* (Cambridge, Mass.: MIT Press, 2008), pp. vii–xii; Tahl Kaminer, *Architecture, Crisis and Resuscitation: The Reproduction of Post-Fordism in Late-Twentieth-Century Architecture* (London: Routledge, 2011); Nadir Lahiji, ed., *The Political Unconscious of Architecture: Re-opening Jameson's Narrative* (Farnham: Ashgate, 2011). It is also worth mentioning the recent republications of Rossi's key writings. In January 2010, *A Scientific Autobiography* was republished by Oppositions and MIT Press in America. In 2011, *L'architettura della città* was republished by Abitare to coincide with the 45th anniversary of Rossi's 1966 book, providing the context for a conference and exhibition at Università IUAV in Venice. Then, in 2012 Abitare published *Scritti scelti sull'architettura e la città 1956-1972*, a collection of Rossi's early writings, that is yet to be translated into English. In addition to these writings, it is interesting to note that La Tendenza was the subject of an exhibition at the Pompidou in Paris, entitled "La Tendenza Architectures italiennes 1965-1985." See Frédéric

but nevertheless a necessary point of discussion. Thus, Rossi has recently been either the focus of analyses, or discussed under different themes such as autonomy, disciplinarity, the city, representation, type, and urbanism. Such discussions, and their repositioning of Rossi's work under different themes points to the following factors: the complexity of Rossi's thinking, the importance of continuously revisiting major figures in the history of architecture, and the necessity of re-examining the major theoretical categories of architecture. These factors are important because to continuously rethink, develop, and transform the major categories of architecture is to understand that architecture is a discipline with its own historically conditioned body of knowledge that develops through conceptual language, built, and theoretical examples. Furthermore, it is interesting that in todays global financial crisis, political thinkers and economists recall the crisis of the transition of Fordism to post-Fordism in the 1970s, which is the precise time frame in which Rossi worked. It is also worthwhile remembering that Rossi's architectural production was set against an ethos of technological optimism and the rise of financial markets. Since the rise in the 1970s, we have experienced numerous crises, particularly evident in recent years. Yet, while the ethos of technological optimism continues today, along with the fetish for figures, indexes and data, Rossi countered this tendency during the initial stages of the current cycle. We can therefore say that it is productive to revisit Rossi to advance current debate.

In this thesis we will revisit the architectural production of Aldo Rossi. We will re-read his texts, drawings, and buildings. In particular, we will inquire into the following theoretical categories of his thinking: the city as an artefact, the idea of type, architectural autonomy, history as collective imagination, and the analogical city. On one hand, these are points of focus in Rossi's production. On the other, they are crucial theoretical categories of architecture, in general. Therefore, by revisiting the work of Rossi we engage in a debate about architecture as a discipline. The aim is to inquire into and update Rossi's key theoretical categories for disciplinary debate today, and thereby sharpen our awareness of architecture's guiding principles, and its significance as a discipline with its own body of knowledge.

In the remainder of this Introduction, we will point to the present state of architecture. Then assess the various ways in which Rossi has been repositioned in recent years to help situate our selection of theoretical categories. Finally, we will summarise the dissertation structure, its chapters, the aims and objectives.

Discipline, Autonomy, and the Lesson of Rossi

In the decades since 1980, architecture has been popularised by Biennale's, exhibitions, publications, and the production of unique architecture-objects. To name only a few examples, we can cite the following: the Venice Biennale, institutionalised for architecture since 1980;[28] MOMAs *Deconstructivist Architecture* exhibition of 1988;[29] the formation of new publications such as *Candide* in 2009, *San Rocco* in 2010, and *Scapegoat* in 2010; the continuing accumulation of architecture-objects produced by recognised architects such as Gehry, Hadid, Herzog & de Meuron, Holl, Ito, Koolhaas, Zumthor, and others, for the gentrification and status of cities as well as cultural institutions. Yet, architecture as a discipline that produces knowledge of itself and frames the wider cultural, social, and political spheres of urban life, is often unacknowledged or entirely dismissed. For instance, it is revealing that in a British Academy publication entitled *Past, Present and Future: The Public Value of the Humanities & Social Sciences* architecture is not mentioned in any of the ten case studies that supposedly illustrate the disciplines that "constitute an enormous reservoir of public value," and that "contribute to the cultural, social and economic health, wealth and reputation of the UK."[30]

We can point out here that to discuss the notion of discipline is to discuss the idea of autonomy. At the risk of discussing a category that we will situate and debate in later chapters, let us say that autonomy needs to be viewed as dialectical and can be summarised in the following way. On one hand, autonomy can be viewed as the withdrawal of architecture from the social, political and cultural sphere, and into an introspective domain of the individual architect-artist. On the other hand, architecture has its own conventions, theories, formal and conceptual principles, which are historically determined and are specific to architecture. By following these conventions, the discipline develops its own collectively produced body of knowledge that can be transmitted generation to generation in texts, drawings and built examples. Yet, architecture interacts with the social, political, cultural, and economic spheres, and at the same time these spheres condition architecture so that the discipline is transformed in parallel with events within these wider spheres, so architecture cannot be entirely autonomous. For instance, in "Rules, Realism and History" Colquhoun points out the following "external pressures:" changes in patterns of settlement and work, technical changes and new materials, economic changes due to the increased profitability of land development, and changes in distributing information, people, and goods.

Understanding architecture as a discipline is important because it reminds us that architecture is a form of knowledge that is collectively produced, historically founded, and socially significant. Texts like Rossi's *The Architecture of the City*, or Alberti's *De re aedificatoria* remind us that architecture goes beyond the art, craft, or technical construction of building. We are reminded that architecture embodies and represents shared values and beliefs, which are at once architectural as well as social.

In his essay "Lost Illusions," Alan Colquhoun has written the following: "It is precisely the absence of common codes that characterise modern society, which is disunited, fragmentary and subject to continuous changes of fashion. The arts and architecture are more than ever characterised by the concept of individual genius and artistic autonomy."[31] It is precisely in the concept of individual genius that architecture has withdrawn into artistic introspection, negating not only the discipline, but also architecture's wider cultural significance. As Reinhold Martin has said in *Utopia's Ghost* architecture makes power real.[32] This power is both that of individual figures and also the social, economic, and political forces at work within culture. Let us briefly point to a few of the salient aspects of the current condition of architecture and the discipline.

Although not a new phenomenon, the internationalisation of architectural production characterises the period from the 1980s. Since then architects have worked simultaneously on many continents obtaining multiple projects that have increased in scale and prestige. This imperial overstretch can be viewed as symptomatic of architecture's capitulation within capitalism – because capitalism expands geographically – and as the sign of a deeper pathology that points to the gradual deterioration of the discipline.

The recent image-based production of architecture is at least one material indicator of this and we can situate the current cycle with the *Strada Novissima* at Paolo Portoghesi's 1980 Venice Biennale. A temporary structure installed within the Arsenale for the first official Biennale of Architecture in Venice, it was dismantled and travelled to Paris where it was reassembled as a piazza, then finally to San Francisco.[33] While the Biennale itself was entitled "The Presence of the Past" in order to evoke the prevailing interest in historical reference at that time, the *Strada Novissima* was a disorientating cacophony of twenty façades, designed by architects including the following: Frank Gehry, Rem Koolhaas, Arata Isozaki, Robert Venturi, Ricardo Bofill, and Christian de Portzamparc, amongst others. In the exhibition catalogue, Portoghesi wrote that the Biennale expressed the "end of prohibition," and was the "symbol of Postmodernism."[34] The *Strada Novissima* represents the shift in architectural thinking toward a pluralist worldview and a focus on surface appearance.

It is significant that the Biennale coincided with the election of Margaret Thatcher as Prime Minister of Britain in 1979, and of Ronald Reagan as President of the United States in 1980, who both put forward a neoliberal worldview that proposed that human well being is best framed by strong private property rights, the free market, and free trade. This is practiced through deregulation, privatisation and state withdrawal from welfare. The neoliberal ethos has been expressed by the willingness of fashion brands, art galleries, museums, and cities to promote their "uniqueness" through the production of "iconic" architecture communicated to a global audience by images on screen and in magazines. Yet, as Koolhass says in "Generic City," his assessment of

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Migayrou, ed., *La Tendenza: Italian Architectures / Architectures Italiennes: 1965-1985* (Paris: Centre Pompidou, 2012). Included in the exhibition was the hitherto missing *Città Analoga* collage panel by Rossi (with Eraldo Consolascio, Bruno Reichlin, and Fabio Reinhart).

28. See Aaron Levy and William Menking, *Architecture on Display: On the History of the Venice Biennale of Architecture* (London: Architectural Association, 2010).

29. See Philip Johnson and Mark Wigley, *Deconstructivist Architecture*, ed. by James Leggio (New York, N.Y.: Museum of Modern Art, 1988).

30. See British Academy, 'Past, Present and Future: The Public Value of the Humanities & Social Sciences' (The British Academy, 2010) <http://www.britac.ac.uk/news/bulletin/BAPPF.pdf> [accessed 4 December 2013]. The following is a list of the disciplines included in the publication: History, Literature & Languages, Psychology, Economics, Law, Medieval Studies, Archaeology, Classics, Geography, Linguistics, Sociology, African & Oriental Studies, Theology & Religious Studies, Philosophy, Ethics, History of art & Music, Anthropology, International Relations, Political Studies. Quotations are p. 6, and p. 2, respectively.

31. Alan Colquhoun, 'Lost Illusions', in *Collected Essays in Architectural Criticism* (London: Black Dog Publishing, 2009), pp. 321–324, (p. 323).

32. See Reinhold Martin, *Utopia's Ghost: Architecture and Postmodernism, Again* (Minneapolis: University of Minnesota Press, 2010). For example p. xiv and elsewhere.

33. See Paolo Portoghesi, *Postmodern: The Architecture of Postindustrial Society*, trans. by Ellen Shapiro (New York: Rizzoli, 1983). First published in Italy in 1982. See also Martin, *Utopia's Ghost*, p. 151-153.

34. Paolo Portoghesi, 'The End of Prohibition', in *Postmodern: The Architecture of Postindustrial Society*, trans. by Ellen Shapiro (New York: Rizzoli, 1983), pp. 14–30.

the urban condition toward the end of the twentieth-century, when all cities reposition themselves as competitive, creative, cosmopolitan, and globally connected, then all identities are the same.[35]

On one hand, iconic architecture has served to raise the profile of individual architects who have put forward designs that are either noisily outrageous or in some way silently sublime. On the other, architecture as a whole, the discipline of architecture, has suffered. The social purpose of architecture has become of secondary importance because architecture as an icon is equated with the powerful appearance of individual designs. Yet, the architectural production of, for instance, Gehry or Zumthor cannot be viewed as solely the formal self-indulgence of artistic geniuses, because architecture serves a strategic role in the representation of the ethos of any given culture, including its collective, individual, and corporate patronage. As Giedion said: "However much a period may try to disguise itself, its real nature will still show through in its architecture, whether this uses original forms of expression or attempts to copy bygone epochs."[36] Thus, we need to remember that architecture is complicit within the current social and cultural condition because architecture actualises power and ideology, framing – as well as projecting – a particular way of living. This reinforces Berardi's observation on the crisis of our social imagination.

Concurrent with the rise of unique architecture-objects has been the development of new terms of reference to describe the condition of architecture and the city. We have already mentioned the term "icon" and its relation with city-branding. We can also point to the following terms: recombinant urbanism, rhizomic assemblage, mutation, junkspace, diffuse modernity, multiplicity, informal city, urban metabolism.[37] Terms such as these do not describe the concrete parts of the city, and do not build on architecture's theoretical vocabulary. Instead, these are first the rhetoric of a weak discipline, and second a reflection on the fascination for quantitative "mapping" of the city. These two aspects are interrelated. Of the first, the following can be said: a rhetoric often put forward simultaneously with a list of facts and figures stating the unprecedented growth of cities, global urbanisation, and world urban population expressed in percentage terms. Take for example, Koolhaas's full page statements in the opening pages of *Mutations*. The first reads: "At the outset of the twentieth century, 10% of the population lived in cities. In 2000, around 50% of the world population lives in cities."[38] A more recent publication, *A New Urban Metabolism* begins with a similar tone and analyses the city as an open system, which recalls debates during the 1970s.

Reflecting on the twentieth-century, Koolhaas writes the following: "This century has been a losing battle with the issue of quantity. In spite of its early promise, its frequent bravery, urbanism has been unable to invent and implement at the scale demanded by its apocalyptic demographics."[39] Through images, statistics, graphs, and charts, Koolhass and his office OMA-AMO relentlessly analyse global issues including demography, population, economy, amongst many others, mapping their global development. Within this situation, the role of the architect has been stripped of the means to affect in a concrete way, aspects of urban life. We find two extremes. On one hand, the role of the architect is reduced to the design of individual buildings for city-branding. In this sense, the architect addresses the packaging of buildings, the aesthetic appearance not the social, political, and cultural content. On the other hand, the architect maps the city, focusing analysis on issues of quantification, and not on formal intervention. This being said, we need to remember that in the years after the global recession of 2008, we have turned from formal exuberance and complex analysis to an ethos of "austerity." Such an ethos, like the exuberance of prior times, should be viewed as a condition that affects the way we live our life, the precarity of life that results from economic austerity, and the production of the architectural forms in which our life is framed.

It is not difficult to find analogies between current debate on architecture and that during the period in which Rossi worked in the 1970s. Through the description, classification, and transformation of architecture's historically produced formal and theoretical conventions, Rossi countered the tendency in the 1960s to study architecture from the point of view of techno-scientific methods of analysis and the assembly of data. On one hand, Rossi understood architectural production as an instrument for the critique of architecture's own formal condition. On the other, Rossi held architecture as a framework for the questioning of the prevalent social, cultural, and political condition. This is the lesson of Rossi; architecture actualises the potential to question the urban forms and spaces in which we live, and the conditions of our urban life. Rossi provides a crucial reference point from whom we can re-learn the major theoretical categories of architecture to bring the present state of architecture into sharp relief.

The Repositioning of Rossi

Let us take time to delineate the various ways in which Rossi's architectural production has been repositioned by different commentators over the years. We can do this by examining the chronology and geographic distribution of Rossi's main theoretical text *L'architettura della città* ("*The Architecture of the City*") and its translations. Simultaneously, we will outline the major themes discussed by this distribution.

City, Language, Autonomy (1971-1976)

The Spanish translation was published in 1971 and allowed readership in Spain, as well as in Latin America. In January 1972, Rossi delivered a lecture in Barcelona, and later travelled to Santiago in 1976 and Buenos Aires in 1978 to deliver lectures and seminars.[40] Let us also remember that in 1973, the Spanish architect and educator Rafael Moneo wrote a review of *L'architettura della città* which combined a study of Rossi's Modena Cemetery. Entitled "Aldo Rossi: The Idea of Architecture and the Modena Cemetery" the essay was translated to English in 1975, the same year Rossi met with Moneo in Madrid. Moneo's essay was later published in *Oppositions*, the journal cofounded by Peter Eisenman, Kenneth Frampton, and Mario Gandelsonas that debated the relations between architecture's formal, socio-cultural and political condition, between 1973 and 1984.[41] In Moneo's essay, he discusses the link between city, architecture, and the idea of type, however for its publication in *Oppositions* Eisenman writes a preface that links the idea of type with the notion of autonomy as a specifically formal condition.

In "The Beauty of Shadows," another essay published by *Oppositions* in Summer 1977, Jorge Silvetti discusses realism in architecture and structuralist thinking in architectural theory.[42] Citing Rossi's "return to language" as characteristic of the 1970s, Silvetti borrows Michel Foucault's opposition of commentary and criticism, where commentary reproduces and legitimises the work under discussion, and criticism judges the discussion, interrogating its "truth."[43] With the Spanish translation of *L'architettura della città* in mind it is interesting to note that South American architects such as Silvetti, as well as Agrest, Gandelsonas, and Machado, were involved with the New York based *Oppositions* publication. Gandelsonas and Silvetti were influenced by the themes that Rossi opened up such as autonomy, representation, and the links between architecture to structural linguistics.

While we are discussing the relations of Rossi's text in the America's, we can point out the timing of each translation. In the Spanish translation of 1971, Rossi would be read within the context of populist authoritarian rule, the military coup in Brazil in 1964, and the revolts of 1968.[44] In the American translation of 1982, Rossi's book arrives to an English speaking audience during the presidency of Reagan and the opening of neoliberal policy, tied to postmodern thinking and globalised culture.[45] On one hand the book is read within an ethos of state dictatorship and on the other, by the demands of the market-economy. Furthermore, it is important to remember that the English language edition came

35. See Rem Koolhaas, 'The Generic City (1994)', in *S,M,L,XL* (New York, N.Y.: Monacelli Press, 1995), pp. 1238–1267.

36. Giedion, *Space, Time and Architecture*, p. 19.

37. See the following: Andrea Branzi, *Weak and Diffuse Modernity: The World of Projects at the Beginning of the 21st Century* (Milan; London: Skira, 2006); Rem Koolhaas, et al., *Mutations* (Bordeaux; Barcelona: ActarD, 2001); Rem Koolhaas and OMA/AMO, *Content: Triumph of Realization* (Köln: Taschen, 2004); David Grahame Shane, *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory* (Chichester: Wiley-Academy, 2007); Christine de Baan, Joachim Declerck and Véronique Patteeuw, eds., *Visionary Power: Producing the Contemporary City* (Rotterdam: NAi Publishers, 2007); Tahl Kaminer, Heidi Sohn and Miguel Robles-Duran, eds., Urb*an Asymmetries: Studies and Projects on Neoliberal Urbanisation* (Rotterdam: 010 Publishers, 2011); Josep Acebillo and Enrico Sassi, eds., *A New Urban Metabolism: Barcelona/Lugano Case Studies* (Mendrisio; Barcelona: Accademia di architettura - Università della Svizzera Italiana Mendrisio, 2012).

38. Rem Koolhaas et al., *Mutations* (Bordeaux; Barcelona: ActarD, 2001), p. 2.

39. Rem Koolhaas, 'What Ever Happened to Urbanism?' (1994), in *S,M,L,XL* (New York, N.Y.: Monacelli Press, 1995), pp. 958–971, (p. 961).

40. See Chiara Spangaro, 'Appendix', in *Aldo Rossi: Drawings*, ed. by Germano Celant, trans. by Paul Metcalfe (Milan: Skira, 2008), pp. 275–302, (p. 286).

41. See Rafael Moneo, 'Aldo Rossi: The Idea of Architecture and the Modena Cemetery (1976)', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984*, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 105–134. Also see K. Michael Hays, 'The Oppositions of Autonomy and History', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984* (New York: Princeton Architectural Press, 1998), pp. ix–xv.

42. See Jorge Silvetti, 'The Beauty of Shadows' (1977), in *Oppositions Reader*, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 365–389.

43. See Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1994), pp. 78-81.

44. For a discussion of the period see Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century, 1914-1991* (London: Abacus, 1995), pp. 287-317.

45. See for example Fredric Jameson, *Postmodernism: Or, the Cultural Logic of Late Capitalism* (London: Verso, 1991).

after the publication of Rossi's *A Scientific Autobiography* in 1981.[46] We should also understand that Rossi's *Autobiography* ended with a Postscript by Vincent Scully which interprets Rossi's architectural production with a metaphysical emphasis that served to increase the enigma surrounding Rossi's work. Let us return to Europe.

L'architettura della città was translated into German in 1973 and coincided with the *Rational Architecture* exhibition at the Milan Triennale, for which Rossi wrote an introductory essay and Massimo Scolari wrote a longer piece. The Triennale assembled a group of architects which Scolari called the *Tendenza*. Both Rossi and Scolari advanced the view that architecture develops according to its own self-generated formal procedures, conventions, and theories, which are determined by the "cultural and productive level."[47] Hence, it is significant that in Eisenman's prefatory remarks for Moneo's essay, mentioned above, Eisenman exaggerates the formal condition of autonomy and neglects its dialectical relation with the wider culture. This is important because it is the key difference in how the English-speaking audience view Rossi's work. An emphasis on aspects such as monument and form, type and morphology, Rossi's enigmatic drawings, in parallel with Scully's opaque Postscript, do not take account of the significance Rossi placed on architectural production within a wider cultural realm.

Yet, the formal condition of architecture was always crucial to Rossi. Commenting on the German translation of *L'architettura della città*, Rossi reiterated that one of the main objectives of the book was to investigate the relationship between the multiplicity of functions and the singularity of form.[48] He reminds us that categories such as topography, typology, and history help to define a theory of architecture in which gratuitous invention is "impossible." Further, Rossi tells us that those who develop only one aspect of his thinking, such as the "autonomy of forms" or the objectivity of urban research, are erroneous because this would "obscure the complex nature of architecture."[49] This last point makes clear the problematic repositioning of Rossi under totalising terms such as "postmodernism" or as an entirely formal architect.

Rationalism, Realism, Figure, Form, and Type (1972-1978)

Coinciding with the German translation of *L'architettura della città* Rossi began a professorship at ETH Zürich in the German speaking Canton of Switzerland. During two tenures as a visiting professor, between 1972-1975 and 1978-79, those who studied under Rossi included the following: Jacques Herzog, Pierre de Meuron, and Roger Diener in the first tenure; and Miroslav Šik and Marcel Meili, amongst others in Rossi's second tenure. It is interesting to briefly note the intellectual and architectural cross fertilisation between the older and younger generations of teachers, mentors, students, and close associates at ETH Zürich. During the years after Rossi, for instance, those who studied under the professorships of Reinhart, Šik and Meili, included Andrea Deplazes, Christian Kerez and Valerio Olgiati, whom later became professors.[50] After this generation the following are notable: Rafael Zuber, Pascal Flammer, Emanuel Christ and Christoph Gantenbein. Within this intellectual environment Hans Kollhoff held a professorship from 1987 to 2012. It is interesting that Kollhoff assisted Ungers at Cornell for the 1976 to 1978 summer schools on the urban block, the urban villa, and the urban garden, bringing with him a focus on the idea of type and a commitment to working with the city.[51]

Ruth Hanisch and Steven Spier have recently revisited the period at ETH when Rossi was a professor.[52] They provide an account of the founding of the Institute for the History and Theory of Architecture (*gta*) in 1967 as the centre for architectural history and theory within the Faculty of Architecture at ETH. Conceived with the view of encouraging interdisciplinary dialogue between practice and theory, Hanisch and Spier note that those who engaged with the *gta* were often graduates of the ETH Faculty of Architecture and therefore were architects. As they note, Rossi's arrival influenced the shift in thinking about architecture as solely a technical study, to the importance of the history of architecture within architectural education. One of the significant graduates was Martin Steinmann who completed his diploma project in 1967 and joined the *gta* as an assistant. A position he held from 1968 to 1978.[53]

In 1975, Steinmann organised an exhibition entitled "Ticino Tendenza" that included Botta, Snozzi, Reinhart, and Reichlin, and for which Steinmann wrote the accompanying essay, "Reality as History: Notes for a Discussion of Realism in Architecture."[54] In his essay Steinmann begins by reminding us that architecture is an important part of material production and is therefore responsive to ruling powers. He follows this with the words: "Architecture is conditioned and is conditioning: architecture as a collective fact is inseparable from society."[55] Steinmann quotes Rossi, and writes that architecture's principles are of a specific nature: "they are derived from architecture itself."[56] Thus, Steinmann advances a thesis on architecture's autonomy linked with the category of "realism," where realism is understood as history. Let us also say that Steinmann's discussion was also a discussion of architectural language, and that this language he made clear should not be an invention without precedent. Rather, language is developed with history, changed, enriched with new definitions in relation to old ones, and continuously transformed.

There are two discussions of the notion of "realism" that seem pertinent here. One by Bernard Huet in an essay entitled "Formalism-Realism," and another by Alan Colquhoun entitled "Form and Figure."[57] Colquhoun puts forward a dialectic between form and figure. The former is defined as pure forms that have either a "natural meaning or no meaning at all."[58] The latter is defined as a form that is culturally specific. Figure thus belongs to a longer historical lineage because a figure is related to the idea of rhetoric. Figure is representative of an idea, and to represent an idea is to put forward a persuasive argument as in the art of rhetoric. While non-figurative form excludes conventions and association, form that is figurative includes convention and association. Colquhoun argues that architecture is a language with a limited number of already existing elements that evolve over time. By contrast, form by itself is always "degree-zero." In the essay, Rossi and the Venturi's are held as architects who raise architectural form to the level of figure, but they do so in different ways. While Rossi turns to "rationalism," the Venturi's turns to "realism," as Colquhoun categorises them. It is interesting to mention that Rossi wrote a short preface to *Mother's House* a book by the Venturi's, in which Rossi writes of his admiration for the Venturi's. In his "Preface," Rossi says the following about the Vanna Venturi house: "It represents a moment in the history of architecture and society, a fixed point in time. And this is no small accomplishment in an era that has lost its centre and even the signs whereby to find it again."[59] These words are from 1991 and although we note Rossi's approval of the Venturi's, we also sense Rossi's disenchantment with the era in question.

In "Formalism-Realism" Huet attempts to confront the contradiction of realism in architecture and links Rossi's *Tendenza* with a realist outlook. On one hand, realism is a will to the representation of reality in all its complexity including the historical and ideological as well as the popular and everyday. On the other hand, realism claims a position of autonomous aesthetic production because aesthetic values are crucial to the representation of reality, and are held as vital to the needs of man. In this case, realism is necessarily formal. Yet, Huet takes an interesting political position and praises socialist realism under Stalin because, "it dealt with the relations and function of art in the new society, and the status and role of the 'intellectual worker' faced with the duties imposed

46. Rossi, *A Scientific Autobiography*, 1981.

47. Aldo Rossi, 'Rational Architecture' (1973), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 55–57, (p. 57). See also Massimo Scolari, 'The New Architecture and the Avant-Garde' (1973), in *Architecture Theory Since 1968*, ed. by K. Michael Hays, trans. by Stephen Sartarelli (Cambridge, Mass: MIT Press, 1998), pp. 126–145.

48. See Aldo Rossi, 'Comment on the German Edition' (1973), in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), pp. 178–179.

49. Rossi, 'Comment on the German Edition' (1973), in *The Architecture of the City*, p. 179.

50. It is notable that Miroslav Šik curated the *Analoge Architektur* exhibition at Architektur Forum Zürich, in which drawings by the following, now significant, architects were included: Conradin Clavuot, Andrea Deplazes, Quintus Miller, and Christian Kerez, Valerio Olgiati. Drawings were usually in perspective and designs located on the city periphery for the following programmes: car showrooms, train depots, housing and workshops.

51. Perhaps one of the threads of research that extends from this period is ETH Studio Basel Contemporary City Institute, which was founded in 1999 by Jacques Herzog, Pierre de Meuron, Roger Diener, and Marcel Meili. The institute researches urban transformation and has produced considerable documentation about cities in recent years, such as the following: Roger Diener et al., *Switzerland: An Urban Portrait* (Basel: Birkhäuser, 2006); and Contemporary City Institute ETH Studio Basel, *The Inevitable Specificity of Cities* (Basel: Lars Muller Publishers, 2013).

52. See Ruth Hanisch and Steven Spier, '"History Is Not the Past but Another Mightier Presence": The Founding of the Institute for the History and Theory of Architecture (gta) at the Eidgenössische Technische Hochschule (ETH) Zurich and Its Effects on Swiss Architecture', *The Journal of Architecture*, 14 (2009), 655–686. Also see Irina Davidovici, *Forms of Practice: German-Swiss Architecture 1980-2000* (Zürich: gta Verlag, 2012).

53. See Hanisch and Spier, '"History Is Not the Past but Another Mightier Presence": The Founding of the Institute for the History and Theory of Architecture (gta) at the Eidgenössische Technische Hochschule (ETH) Zurich and Its Effects on Swiss Architecture', p. 668.

54. Martin Steinmann, 'Reality as History: Notes for a Discussion of Realism in Architecture' (1976), in *Architecture Theory Since 1968*, ed. by K. Michael Hays (Cambridge, Mass: MIT Press, 1998), pp. 248–253.

55. Steinmann, 'Reality as History,' in *Architecture Theory Since 1968*, p. 248.

56. Ibid., p. 248.

57. See Bernard Huet, 'Formalism-Realism' (1977), in *Architecture Theory Since 1968*, ed. by K. Michael Hays, trans. by Brian Holmes (Cambridge, Mass.: MIT Press, 1998), pp. 256–260; and Alan Colquhoun, 'Form and Figure' (1978), in *Collected Essays in Architectural Criticism* (London: Black Dog Publishing, 2009), pp. 130–139.

58. Colquhoun, 'Form and Figure' (1978), in *Collected Essays in Architectural Criticism*, p. 130.

59. See Aldo Rossi, 'Preface', in *Mother's House: The Evolution of Vanna Venturi's House in Chestnut Hill*, ed. by Frederic Schwartz (New York, N.Y.: Rizzoli, 1992), pp. 8–9, (p. 9).

by a precise social commission."[60] The artists of socialist realism expressed both the complex relations of class struggle and affirmed the value of collective consciousness. Huet proposes that the urban plans and buildings constructed under socialist realism, such as the Moscow Metro and Karl-Marx-Allee in East Berlin merit reflection and that the relation between architecture and politics should be seriously analysed. Huet writes the following: "Socialist realism is not only a glorious episode in the history of contemporary architecture, but also the sole alternative proposed to the 'formalisms' born of the failure of the avant-garde in the West: the International Style, 'international picturesque,' 'kitsch,' professional commercialism."[61] Huet thus proposes that the concept of realism opposes the exclusively formal quest for "originality" because such singular intention leads to failure, and at the same time realism opposes the crude consumerist values of the "popular" aesthetic proposed by Venturi.

Counter to a realist outlook is Eisenman's formal worldview. In "Post-Functionalism," Eisenman's Editorial for *Oppositions* 6 in 1976, he attempted to triangulate structural linguistics, conceptual art, and architectural form.[62] Eisenman asserts that Modernism in architecture was a new and distinct sensibility, that was not reliant on the form and function dialectic. It was a language of form, in which the architectural object is like the "art-object" of conceptual art that should only speak of its own "objecthood." For Eisenman, the architectural-object is a representation not of subjectivity, but the formal representation of the architectural process itself. Eisenman proposes that Modernism needs to be re-thought as an evolution of form. In this regard, Eisenman's position is aligned with what Clement Greenberg raised in his essay "Avant-garde and Kitsch," published in 1939.[63] Greenberg put forward that the content of art was in its purely aesthetic development. Both Eisenman and Rossi put forward a critique of the Modern Movement through the idea of autonomy and at the same time extended the aesthetic project of the Modern Movement. Both, also view autonomy as related to the language of architectural form. However, while Rossi's critique is primarily mediated by the idea of type, Eisenman's is mediated by a view of architecture as conceptual art. These positions are considerably more complex than put forward here, so we will come back to them, but for now let us turn to another essay in *Oppositions*.

The editorial by Vidler, entitled "The Third Typology," was later extended as a longer essay and proposes that Rossi's autonomous architecture was evidence of a "third typology."[64] For Vidler, Rossi's idea of type is not metaphorical, as in prior theories of type. Rossi refers to the city itself because the city contains the material for classification and classifiable forms become the material for recomposition. We will discuss the idea of type in chapters to come but it is worthwhile outlining Vidler's three typologies directly, remembering that the following is a sketch.

The first typology, which is situated in the Enlightenment, proposes that architecture is like nature. On one hand, type is metaphorically related to nature as forest, as in Laugier's *cabane* which asserts the hut as a type. On the other hand, type is metaphorically related to the taxonomy of natural species, such as animals and insects, as in Durand's classification of building *genres*.

The second typology confronts mass-production in the period since the second Industrial Revolution. The idea of type in architecture is linked to the mass production of objects, from the smallest tool, to the car, and larger machine. The production line of architecture begins with the column and wall, to the house and institution, then ends with the city.

In both of these typologies, architecture is validated by that which is not architecture: rational science and industrial production. Hence, architecture becomes scientific in the "first" typology or an industrial product in the "second" typology. In the "third" typology, architecture is validated by itself, and not nature nor industry. Vidler, thus turns the idea of type into an argument of formal autonomy exemplified in the work of Rossi. While Rossi is critical of the Modern Movement for its focus on zoning, rejection of history, and reductive sense of architecture's formal condition, Rossi also extends the idea of Modernism. He turns to the clarity of the Enlightenment city and in doing so, Rossi resists the fragmentation and decentralisation of the Modern city, its strategies of zoning and overly-optimistic view of technological advance. Therefore the third typology uses the arcade, block, institution, park, square, and street as its material for transformation. These urban types have accrued human experience, labour, and history, evolving over time. They bring with them this history so that in their transformation for the present builds on this history and connects the history of the city with the present city.

Consolidation and Reflection (1981-83)

We have now outlined the dissemination of Rossi's ideas in Europe, north and south America during the 1970s and 1980s through translations to Spanish (1971), German (1973), Portuguese (1977), American English (1982), then to Japan (1991), and China (1992), as well as two exhibitions in London and Dublin in 1983. Amongst the collaborators for the Dublin exhibition were the following architects: Sheila O'Donnell, John Tuomey, Niall McCullough, and Valerie Mulvin. It is important that the catalogue to this exhibition includes a selection of English translations of Rossi's writings, such as "Architecture for Museums" and "Rational Architecture."[65]

The exhibition in London was held at ICA and comprised Rossi's drawings and projects along with photographs of his built works. Micha Bandini wrote the Introduction to the catalogue, which was in effect a summary of an essay published in *AA Files* in 1981. In that essay Bandini finds the following four "periods" in the work of Rossi: the Casabella period, the Polis period, the projects period, and the international period. The first began in 1955 with Rossi's involvement with *Casabella-Continuità* under the editorship of Ernesto Rogers. It allowed Rossi to formulate a preliminary theoretical framework through writing, and as Bandini comments, this period ended in 1964 when Rossi and the editorial staff left the journal. The "Polis" period lasted between 1965 and 1969 when Rossi was engaged with publishing, editing, and teaching. "Polis" was the title of a book series that Rossi edited under the Marsilio publishing house, which published *L'architettura della città* in 1966. Rossi was thus able to promote other authors, and by writing introductions such as that for Ludovico Quaroni's *La Torre di Babele* or that for Boullée's *Architettura saggio sull'Arte*. Bandini's third period is that of "Projects" which began around 1970 when Rossi completed the Gallaratese housing block in Milan, his first major built work. Bandini divides this period into two phases and comments that while in the first phase Rossi's writing and design hold equal importance, in the second phase, Rossi's visual production is emphasised. Bandini notes that the "International" period of Rossi's evolution begins when he starts to teach at ETH and his influence expands beyond Italy. In the remainder of Bandini's essay, she discusses Rossi's idea of type and the, "completely original to Rossi," concept of the analogical city as a "powerful visual intuition," but which suffers from a "hollow circularity."[66]

Autonomy, Discipline, History and Theory (2006-2013)

Let us now turn to the more recent discussion on Rossi. In "The New Urban Scale in Italy" Lobsinger revisits *The Architecture of the City*.[67] She distinguishes between the first publication of Rossi's book in the Italian culture of 1966, then its repositioning in the culture of 1982. Lobsinger reminds us that an English language audience will have been acquainted with Rossi the artist-architect, but not Rossi's theoretical position. When concluding her essay, Lobsinger notes that there are parallels between what Rossi and other architects of the 1970s opposed and some of the current thinking on architecture and the city. She notes "landscape urbanism" and "adaptive systems" as two such emergent urbanisms that are comparable to the discussion of decentralisation in the 1970s. We might also add the "informality" which embraces the notion of unplanned urbanism. The two scales that are at work are on one hand the drive to objectifying the city and its region through endless statistical analyses and totalising diagrams that never view the city as a concrete and material artefact that frames the life of individuals. On the other hand, the concept of informality is so incremental that the wider city is negated and a structured plan for the concrete condition cannot be put forward.

Another text to revisit Rossi's thinking, which was published close to Lobsinger's, was "The Difficult Whole" by Aureli.[68] He concentrates on

60. Huet, 'Formalism-Realism' (1977), in *Architecture Theory Since 1968*, p. 256.

61. Ibid., p. 257.

62. Peter Eisenman, 'Post-Functionalism' (1976), in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984*, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 9–12.

63. See Clement Greenberg, 'Avant-Garde and Kitsch' (1939), in *Art and Culture* (Boston: Beacon Press, 1989), pp. 3–21. Collection of essays first published in 1961.

64. See Anthony Vidler, 'The Third Typology' (1976), in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984*, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 13–17; Anthony Vidler, 'The Third Typology' (1978), in *Architecture Theory Since 1968* (Cambridge, Mass.: MIT Press, 1998), pp. 288–294. The latter is an expanded version of Vidler's Editorial for Oppositions and published in Robert L. Delevoy, ed., *Rational Architecture Rationelle: The Reconstruction of the European City* (Bruxelles: Archives d'Architecture Moderne, 1978).

65. See Aldo Rossi, *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan (London: Architectural Design, 1983).

66. See Micha Bandini, 'Aldo Rossi', *AA Files*, 1 (1981), 106–111; Micha Bandini, 'Introduction', in *Aldo Rossi: Architecture, Projects & Drawings* (London: ICA Publication, 1983), pp. 39–43.

67. See Mary Louise Lobsinger, 'The New Urban Scale in Italy: On Aldo Rossi's L'architettura Della Città', *Journal of Architectural Education*, 2006, 28–38.

68. See Pier Vittorio Aureli, 'The Difficult Whole: Typology and the Singularity of the Urban Event in Aldo Rossi's Early Theoretical Work, 1953-1964', *Log*, ed. by Cynthia Davidson, 9 Winter/ Spring (2007), 39–61.

the development of Rossi's thinking between 1953 to 1964 and frames the discussion around the following categories: realism, rationalism, and theory. Venturi's concept of the difficult whole is invoked to describe the "impossible" relationship between analysis and project. As Aureli remarks in discussing The Venturi's concept, the difficult whole is hard to achieve and is thus the aspiration to unity. The description seems apt because Rossi's work cannot be reduced to single and totalising labels such as postmodern, rational, or the "leader" of autonomous architecture, as some of our discussion to this point might lead us to believe.

In a short book published after "The Difficult Whole" Aureli returns to Rossi in *The Project of Autonomy* and connects the Italian *Autonomia* political movement of the 1960s to 1970s, with a discussion of autonomy in architecture.[69] Rossi was one of the main protagonists. Aureli first situates the category of autonomy within political theory and the rise of autonomous municipalities starting in the fourteenth-century. The autonomous municipality is political autonomy at the practical level. At a theoretical level, Aureli reminds us that the writing of Machiavelli interpreted politics as a "criteria of action." Aureli takes us through a condensed history of political autonomy and writes that modern political autonomy between the Enlightenment to the 1960s can be characterised in two ways. On one hand, as the autonomy of the human subject, and on the other as the convergence of technological development. The former is manifest in the replacement of governmental models such as transitions from monarchical rule, or as the validity of new forms of art. The latter is manifest in the rational study of natural species in the sciences. We have noted this in the discussion of type by Vidler. While subjectivity and technological development converge on the theme of rationality, this leads us to the contradictory notion of free will. On one hand the freedom of the individual, and on the other, the capitulation of the individual within the rational growth of capitalism as "free-trade." With this as background, Aureli discusses the Italian intellectual activist movement known as *Autonomia* and therefore re-opens the category of autonomy, but considers autonomy from the viewpoint of the political sphere. In doing so, Aureli counters much of the prevalent literature on Rossi and the emphasis on formal autonomy. To be sure both the formal and the political are interrelated, and we will discuss this in the chapters to come.

It is interesting to read Aureli's discussion because he reminds us that at one point not long ago, architecture held a position of such significance that it was viewed as a vital instrument of social transformation. Aureli concludes his book by saying that the project of autonomy is a lesson in theoretical effort relevant today not because of its specific content but because of its method.

While Aureli reminds us of the political foundation inherent to the idea of autonomy, in *Architecture's Desire* Michael Hays puts forward a psychoanalytic account of architecture's "desire" to be autonomous.[70] Hays offers four cases in the work of Rossi, Eisenman, Hejduk, and Tschumi. Hays' argument is complex and one that we will come back to, so let us simply raise the point that in Hays' discussion of Rossi the focus is on the themes of city, autonomy, form and type, within a chapter entitled "Analogy." In a sense, Hays returns to Eisenman's essays on Rossi written around 1980 and develops them from the point of view of Lacanian psychoanalytic theory.

The two main texts of Eisenman that seem relevant here are "The House of the Dead as the City of Survival" and "The Houses of Memory: The Texts of Analogy."[71] In the former, Eisenman puts forward an historical-psychoanalytic account of Rossi and connects analogical thinking with unconscious thinking. In the latter, Eisenman reads Rossi's work as a development of Modernism and as an "other" architecture running parallel to Modernism but distinctly separate. Eisenman and Hays both emphasise the category of memory in Rossi's work. A problematic category that can all too easily read as either nostalgia or introspection. We need to remember that memory was put forward by Rossi as collective memory. We need to also remember that memory is an exaggeration of the category of history, which Rossi put forward to counter the Modernist debate which rejected history.

In this brief summary of the repositioning of Rossi we have pointed to a number of theoretical categories that Rossi himself put forward, or have been put forward by others to understand the architectural production of Rossi. We started by discussing the categories of city, language, and autonomy. Other categories followed, including: rationalism, realism, figure, form, and type. We also noted a period during which commentators seemed to consolidate their thinking on Rossi, history, theory and on the discipline of architecture. Then, in recent discussion, Rossi has been revisited under themes including discipline, autonomy, politics and poetics. Thus, we outlined the conceptual vocabulary through which Rossi's architectural production might be understood. We said that much of the literature on Rossi emphasises the idea of autonomy as the autonomy of form, and therefore often negates the wider cultural sphere. However, Rossi always proposed that architecture is a category of reality so architects, as cultural producers, cannot reject the wider cultural, social, and political sphere.

In chapters to follow, we will come back to many of these commentators, and others. What we have not yet discussed is Rossi's concept of the analogical city. A concept that is often described by commentators such as Hays, Eisenman, and Scully, using opaque language such as the following statements: Hays writes of the "ghost-lit cityscapes" that mark Rossi's "desire" for autonomy;[72] Eisenman writes of Rossi's "internalised, analogous design process;"[73] and Scully notes the "solitary" and "dreamlike" qualities of Rossi's analogical architecture.[74] These are not adequate descriptions. We will attempt to clarify some of the characteristics of Rossi's concept of the analogical city and describe the various ways in which Rossi put forward the analogical city, because the analogical city remains the least clearly defined aspect of Rossi's architectural production.

Thesis Outline

The primary method of inquiry is visual and literary montage, a technique considered as simultaneously analytic and synthetic. Montage provides a way to isolate theoretical categories and formal examples from the mass of material, then make connections between things otherwise different in order to provide new insight. It follows that the production of images and the close reading of texts have been crucial in developing the argument. An argument that is guided by a dialogue with Rossi's architectural production, involving a close reading of his key texts, drawings, and buildings. With this in mind, many of the architectural and literary references that we will discuss are also references of Rossi. Authors such as literary, theoretical, and philosophical thinkers including Charles Baudelaire, Walter Benjamin, and Maurice Halbwachs; architects and architectural thinkers including Leon Battista Alberti, Emil Kaufmann, Quatremère de Quincy, Étienne-Louis Boullée, and Jean-Nicolas-Louis Durand. However, these references are read in relation to current architectural thinkers such as Pier Vittorio Aureli, Sven-Olov Wallenstein, and Anthony Vidler, as well as political thinkers like Christian Marazzi and Paolo Virno. Thus, a dialogue is created between the recent and distant history of architecture. With Rossi and the discipline of architecture, and between architecture's formal condition in relation to wider spheres of influence. Let us now outline the chapters and the overall structure of this dissertation.

The first two chapters after this Introduction are closely linked and the title of each reflects this. Chapter Two, entitled "History Disintegrates into Images: In Dialogue with Rossi," explains the methodology of visual and literary montage, and thus the interrelation of image and language. It does this by discussing the production of images in architecture, and the elaboration of conceptual vocabulary. A number of canonical examples of visual production by architects are selected to demonstrate that drawings and images are a crucial part of knowledge production in architecture. We turn from Serlio's geometrical grid to Durand's descriptive drawing technique; Piranesi's montages, Mies' photomontages, Le Corbusier's paintings, Archizoom's non-figurative drawings, and Rossi's urban backgrounds. We note Alberti's proposition that the drawing itself is architecture, and that the building is an analogue of the drawing. We can say that the drawing is the site of speculation and is the first instance of bringing theory into form. Thus, images are ideas and bound to language, so we will discuss the production of descriptive categories. In the same chapter, we refer to Eliot who said that the labour of sifting, combining, correcting, and testing, is as much critical as creative. While Eliot's words are on composing literature, we can relate them to montage, where montage stands for the isolation of images, words, and ideas, their separation, substitution, juxtaposition, and superimposition. We then refer to Benjamin on literary-montage, so as to put forward the importance of montage as a method of both visual and literary inquiry.

In Chapter Three, "History Disintegrates into Images: Visual Documents," a number of the author's visual production is documented as a portfolio of work. Drawings and montages were produced as studies which

69. See Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013). First published in 2008.

70. See K. Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010).

71. See Peter Eisenman, 'The House of the Dead as the City of Survival', in *Aldo Rossi in America: 1976-1979* (IAUS New York: MIT Press, 1979), pp. 4–15; Peter Eisenman, 'The Houses of Memory: The Texts of Analogy', in *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), pp. 2–11.

72. Hays, *Architecture's Desire*, p. 17.

73. Eisenman, 'The Houses of Memory,' p. 8.

74. See Vincent Scully, 'Postscript: Ideology in Form', in *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981), pp. 111–116.

develop a visual-cognitive library of specific examples (as images) retained for recall in future work. This has resulted in a general visual and literary framework, with the following categories linked to the images: analytical de-montage, operative re-montage, allegorical montage, typological criticism and critical mimesis.

In Chapter Four, "The City as an Artefact: De-Montage of The Architecture of the City," we analyse Rossi's main theoretical text *The Architecture of the City* and situate it within a frame of reference of his enrolment at the Milan Polytecnico in 1949, his work at Casabella-*Continuità*, and a number of his early projects. We discuss Rossi's focus on the city, his "historical consciousness," and his opposition to an architectural language of on one hand historical imagery, and on the other the complexity of the megastructure, which were both prevalent at the time. Rossi proposed a critique of the Modern Movement and the history of the city by revisiting the idea of type. For Rossi, the city constitutes the repository of human labour, and the collective memory of its people. The city is thus an artefact made up of many individual urban artefacts. Just as Rossi de-montaged architecture and the city, we de-montage *The Architecture of the City* to analyse its thematic framework and the many theoretical categories Rossi proposed, including the following: artefact, collective memory, locus, study area, primary element, permanence, monument, and type.

Having enumerated Rossi's early architectural production, in Chapter Five "Typology: The Idea of Type and the Canon of Architecture," we turn to theories of type. The idea that on one hand, typology, (or type), proposes a generalising framework to study the city, single buildings, or urban themes; and on the other as an instrument for the formal production of architecture. We debate Rossi's idea of type and the examples Rossi turned to for influence, situated within a lineage of the major theories of type in the history of architecture, including those by Alberti, Serlio, and Palladio in the Renaissance, to Boullée, Laugier, Quatremère de Quincy, as well as Durand in the Enlightenment, then Le Corbusier and Hilberseimer in the early twentieth-century. We also discuss the critique of the Modern Movement put forward in the theories of type by Argan, Grassi, and Ungers. Theories take form in architectural examples so in this chapter, as in others, we discuss built and drawn examples of architectural works.

In Chapter Six, "Autonomy: Withdrawal, Confrontation, and Integration," we debate the theme of autonomy in architecture and discuss the recent and more distant literature on the topic. We note Adorno in *Aesthetic Theory* who said art has a double character that is both autonomous and is a social fact. He says that each side of this double character is also present in the other by its exclusion. The same can be said of architecture. As an autonomous discipline, architecture has its own self-referential body of knowledge. A body of theories, built and unbuilt examples, and representational techniques, that have been transmitted, developed, and transformed from generation to generation through architectural texts, buildings, and drawings. Yet, architecture is ideological because architecture manifests dominant worldviews, collective values, or common beliefs, by engaging with politicians, developers, clients, patrons, users and publics, as well as institutions, states and governments. As we have already said, the autonomy of architecture is the confrontation of architecture with the social, political, and cultural sphere of the city, where collective values and personal desires are manifest in the architectural form that produces the city and the subjectivity of its people. Thus, through the category of autonomy we understand the necessary and reciprocal dialectic architecture has with the city and with culture.

In Chapter Seven, "Analogical City: The Productive Capacity of Destruction and the Analogical City," we will situate Rossi's concept of the analogical city within a discussion of the evolution of his thinking on the concept. While most commentators situate Rossi's thinking on analogy with a painting by Canaletto, we will situate the concept with Rossi's mention of Baudelaire's "correspondances" as an "analogical approach" in his essay on Boullée. We will do this by discussing Benjamin on Baudelaire and link Rossi's concept of the analogical city with Benjamin's dialectical-image as a form of montage. Benjamin helps us gain further insight on Rossi's notion of collective memory which we consider within a framework of what Benjamin calls the "destructive character." Having put forward the analogical city as a montage, we find the following dialectical aspect of the analogical city: on one hand, the tragic and melancholic isolation of elements in the analogical city of Rossi; and on the other, the isolation of elements become conceptual fixed points of reference around which connections can be made and that those connections are the potential for a future presence. Thus, the analogical city, like montage, relies on the dialectic of isolation and connection to point the way to new associations.

In the Conclusion, subtitled "Analogical City and the Urban Scale," we put forward the conceptual framework that the prior chapters have been working toward, and describe its relations. We re-montage the set of theoretical categories that we debate in prior chapters, discussing the analogical city in relation to categories including: the city as an artefact, the idea of type, formal autonomy, history as collective imagination, and the idea of political form. We connect the analogical city with Benjamin's concept of history and discuss the relation between formal and political autonomy to the analogical city. Thus, Rossi's analogical city reminds us of the potentiality of the human mind for thinking, feeling, remembering and imagining. It puts forward the potential for a future presence. A presence that is counter to the prevalent tendency, alternative to what is current, and a view that something else is always possible.

Having outlined the content of each chapter, let us summarise the dissertation structure which can be conceptually divided in the following way. Chapters Two and Three largely, but not entirely, discuss the production of images. Hence Chapter Two is on the production of images in architecture in general and Three is on the author's visual production in particular. By contrast, in chapters Four to Seven specific theoretical categories organise the thesis which is reflected in the chapter titles. In these latter chapters, we inquire into the architectural production of Rossi supported by a selective reading of major figures as well as canonical theories and projects from the discipline of architecture. Having isolated the theoretical categories and undertaken their close analysis, the Conclusion synthesises the categories within a general conceptual framework, as has been said.

Parallel to the thematic focus, each chapter has been chronologically organised in two ways: first, according to its specific theoretical category, and second because each chapter advances through the chronology of Rossi's work between 1949 to 1984. The chronology is as follows: Chapter One, from Renaissance drawings to drawings by Rossi; Chapter Two, on the author's visual production, from 2009 to the present; Chapter Three, on Rossi's architectural production between his student time at Milan Polytecnico to the publication of *The Architecture of the City* so is inclusive of the years 1949 to 1966; Chapter Four situates type within a chronology since the Renaissance to Rossi around 1976; Chapter Five from Kaufmann's discussion in the 1930s to 1950s of Boullée and Ledoux in the Enlightenment, to Rossi's *Tendenza* in 1973; Chapter Six from Rossi's idea of the analogical city in his essay on Boullée in 1967, to the references he discusses in *A Scientific Autobiography* of 1982; Chapter Seven ends with the "completion" of Rossi's Modena Cemetery in 1984.

We will take the view that it is necessary to distinguish separate themes and chronologies for the purpose of analysis, yet always remembering that these themes not only confront one another as if adjacent, but overlap, become superimposed, and contradict both the thematic content and perceived chronology. Hence, our chapters undertake a process of analytical de-montage, then in the conclusion, we re-montage these themes and discuss their co-determinancy.

Let us now end this introduction by summarising the aim of this thesis and its objectives. The aim is to put forward conceptual frameworks to inquire into and update the following theoretical categories of Rossi's architectural production: the city as an artefact, the idea of type, the notion of architectural autonomy, history understood as collective imagination, and the concept of the analogical city. To revisit Rossi will help us re-engage with architecture as a discipline. A discipline that has, in the last decades, become weak and diffuse seemingly rejecting architecture's fixed terms of reference. As we have said, it is a paradox that while the architecture of a few individual talents continues to be celebrated for its unique appearance, our awareness of architecture as a discipline with a collective body of knowledge that grows, develops, and transforms over time, is ever less recognisable. If we fail to recognise architecture as a discipline, then architecture itself risks being humiliated by the continuing production of individually conceived architecture-objects received on one hand, by a common view of architecture as a cultural commodity, and on the other, by a dominant class that views architecture as purely a tool for economic development – and hence not for the advancement of knowledge through architecture as such – that commodifies our imagination.

On one hand, our inquiry puts forward a close reading of particular aspects of Rossi's formal and theoretical production, examining Rossi's work as well as other commentators on Rossi's work. On the other, our inquiry is supported by a selective reading of major figures as well as canonical theories and projects from the discipline of architecture. In both cases detailed readings of texts, drawings, built and unbuilt work is undertaken. By discussing the category of discipline, we point to future work on how architecture negotiates its formal condition and its societal role. In this case, we might re-learn that architecture is an instrument that puts forward singular alternative ways of living and critical interpretations of existing conditions.

2.

HISTORY DISINTEGRATES INTO IMAGES, I

IN DIALOGUE WITH ROSSI

A thought becoming a thing: here is what a real abstraction is.

Paolo Virno, *A Grammar of the Multitude*, 2004.[1]

Thought ceases to be an invisible activity and becomes something exterior, "public," as it breaks into the productive process.

Paolo Virno, *A Grammar of the Multitude*, 2004.[2]

The purpose of this chapter is to put forward the overall methodology that underlines this inquiry, and which is embedded in the content of the chapters that follow. It is worth pointing out from the outset the productive tension between the following two processes of thinking: an image-based process, and a text-based process. These two processes are considered equivalent but autonomous. At almost all times, thinking starts with an image – a photograph, a building, a diagram, a sketch study, a collage – which provides a point of departure. However, this is supplemented by a discussion of the image and its cultural condition. Images, as material entities, embody the subjectivity of the producer and to a large extent the values and beliefs inherent to the milieu of its creation.

With this discussion it is possible to be reminded of the debate about practice and theory. A debate that is often considered as the practice of design and the writing of theory, and by association, the production of images and the reading of texts. We need to be clear that drawing and writing are equivalent practices and processes but have different languages. One requires a language of images, the other a language of words. Thus, drawing an image and writing a text are both equally methods of thinking as well as a form of practice. Both serve to stimulate a thinking process, to correlate ideas, formulate relationships, explain connections, and describe a topic.

In what follows, we will discuss the core methods of visual and literary montage. To do so, we will rehearse a few canonical examples of producing images in architecture, as well as link with Walter Benjamin's method of literary-montage. We will discuss a number of commentators from whom we borrow the terminology with which we can discuss the research. In doing so we discuss the dialogue with the work of Rossi.

The Production of Images

In *The Manhattan Transcripts* Bernard Tschumi investigates architectural notation. Tschumi uses plans, axonometrics, and diagrams, with photographs and story-boards, to inquire into four urban types in Manhattan: the park, street, tower, and block. "Drawings," as Tschumi says, "are both key means and limitations of architectural inquiries."[3] Drawings became important in architecture when architecture was distinguished from the practice of building in the fifteenth-century. The ability to draw was the ability to represent ideas as images in order for ideas to be discussed with patrons, and translated into buildings. In this section, we discuss a selection of examples for the methods in which our inquiry has been undertaken. It should be noted that some examples and figures of our discussion in this chapter will not be situated until later chapters where the chapter theme is in closer alignment with the given example or figure.

Fig. 2.1.

Sebastiano Serlio began his treatise on architecture with a taxonomy of geometric elements that describe and delineate the language of drawing in *Book One On Geometry*, which is then taken up further in *Book Two On Perspective*.[4] Prior to Serlio, Alberti had defined architectural notation in *De re aedificatoria* and emphasised the drawing of plans, elevations and sections, rather than perspectives. In the first chapter of *Book Two On Materials*, Alberti wrote:

> The difference between the drawings of the painter and those of the architect is this: the former takes pains to emphasise the relief of objects in painting with shading and diminishing lines and angles; the architect rejects shading but takes his projections from the ground plan and, without altering the lines and by maintaining the true angles, reveals the extent and shape of each elevation and side - he is one who desires his work to be judged not by deceptive appearances but according to certain calculated standards.[5]

In *De re aedificatoria*, Alberti distinguished between building and design (*lineamenta*).[6] The word design is a reminder of the relationship to *disegno* which is for the two-dimensional delineation of an object.[7] In Alberti's theory, *disegno* is architecture. Put another way, the drawing is architecture, and the building is the analogue. Thus, unlike the Medieval master-builder, the Renaissance architect does not build but designs architecture. The concurrent invention of the printing press in the middle of the fifteenth-century allowed architects to disseminate ideas and designs effectively and accurately in printed books accompanied by woodcuts and intaglio techniques of image reproduction. The production and reproduction of images in parallel with the theoretical codification of the principles of architecture, and how the parts of buildings are composed, is crucial for understanding architecture as a discipline with a transmittable knowledge. We can briefly select a few key examples in which the image as a method of inquiry and technique of knowledge transmission in architecture is important.

Although Alberti did not illustrate *De re aedificatoria*, Serlio's treatise combined images and text throughout. As we have mentioned, it began by delineating geometrical elements from the point, line, and plane, to square, circle, triangle, and then other irregular shapes. One of the key images of this first book is Serlio's drawing of a ten by ten square grid. It is a drawing that we can say depicts the archetypical apparatus of the systematic ordering of thought in architecture, and as Krauss has said in discussing the grid, the "infrastructure of vision."[8]

Although the grid has a history that predates modernity, for its use as a tool for the precise measurement and representation of architectural design, we can turn to Durand's *Précis des leçons d'architecture donnés a l'Ecole Polytechnique* ("*Summary of Lectures on Architecture Delivered at the Ecole Polytechnique*"), of 1802-1805. As the title suggests, Durand's *Précis* was in the first instance a teaching manual, in which examples of buildings are drawn in plans, sections, and elevations, using fine ink lines guided by a modular grid. The purpose of Durand's drawing was therefore didactic. Although there are few examples in Durand's books that illustrate the volume rather than the outline of buildings, one example of perspective in his *Précis* describes different combinations of horizontal and vertically articulated volumes within a square plan. While the perspective is the least common of architectural notations in Durand's books, it is grids and axes that become his main structuring apparatus. Durand's drawings were based on a prevalent worldview that, coming after the metaphysical speculation of Boullée in the late 1700s, turned toward the mechanistic outlook of industrialisation beginning in the early 1800s.[9] The rapid multiplication of people, goods, and services provided the backdrop to the Modernist ethos in the early twentieth-century.

Fig. 2.2.

By contrast to work guided by a regulating grid, Piranesi was producing large engravings in the middle eighteenth-century. His etching of the *Campo Marzio*, which Tafuri has called "formal *bricolage*," was put forward as a critical project in opposition to the Nolli plan of Rome.[10] Through his drawings, Piranesi proposed a critique of Rome's urban condition, and he was a formative influence on Rossi, whom included a fragment of the *Campo Marzio* in Rossi's *Analogical City* collage of 1976. We will come to this in later chapters.

Fig. 2.3.

While the history of architecture is, on one hand, the history of material production (from timber, brick, concrete to steel and glass), the history of architecture is also a history of immaterial production. Architecture is linked with processes dependant on verbal and written description, as well as visual notation and built form that manifest belief systems, ideas, and shared customs. Techniques of image production put forward the surface appearance of deeper

1. Paolo Virno, *A Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*, trans. by Isabella Bertoletti, James Cascaito, and Andrea Casson (Los Angeles, CA: Semiotext(e), 2004), p. 64.

2. Virno, *A Grammar of the Multitude*, p. 64.

3. Bernard Tschumi, *The Manhattan Transcripts* (New York, NY: Academy Editions, 1994), p. 6. First published in 1981.

4. See Sebastiano Serlio, *The Five Books of Architecture* (New York; London: Dover, 1982). Serlio composed his treatise in seven books published separately between 1537 and 1575. See also Sebastiano Serlio, *Sebastiano Serlio on Architecture: Books I-V of 'Tutte l'Opere d'Architettura et Prospetiva'*, trans. by Vaughan Hart and Peter Hicks (New Haven, Conn.: Yale University Press, 1996).

5. Leon Battista Alberti, *De re aedificatoria*, trans. by Joseph Rykwert, Robert Tavernor, and Neil Leach (Cambridge, Mass.: MIT Press, 1988), p. 34. First published in 1485. Alberti also warned against the allure of scale models and decorative effects which "attract and seduce the eye of the beholder," diverting attention from examination of that which is under consideration.

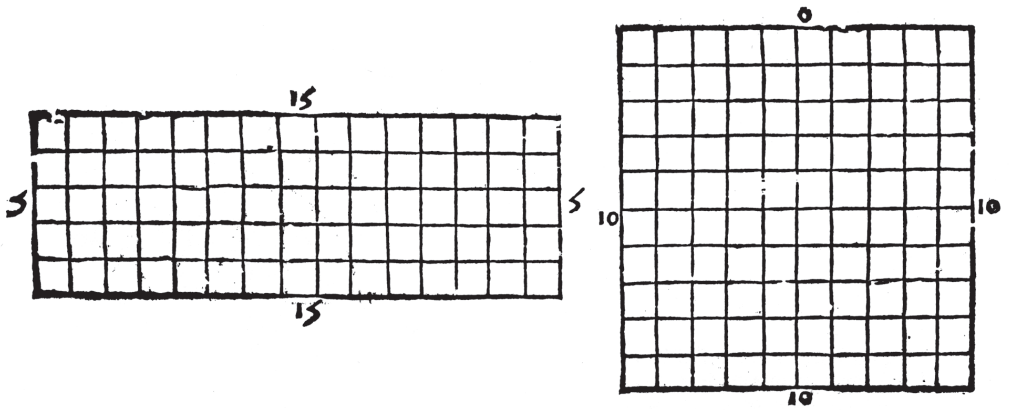
6. Alberti, *De re aedificatoria*, p. 7 and pp. 33-35. Also see Mario Carpo, *The Alphabet and the Algorithm* (Cambridge, Mass.: MIT Press, 2011).

7. See discussion in the glossary, Alberti, *De re aedificatoria*, pp. 422-423.

8. Rosalind Krauss, 'Grids', *October*, 9 (1979), 51-64 (p. 57).

9. See Eric J. Hobsbawm, *The Age Of Revolution, 1789-1848* (London: Abacus, 1986). First published in 1962.

10. Manfredo Tafuri, *Theories and History of Architecture*, trans. by Giorgio Verrecchia (London: Granada, 1980), p. 113. Originally published in Italy under the title *Teorie e storia dell'architettura*, 1968.



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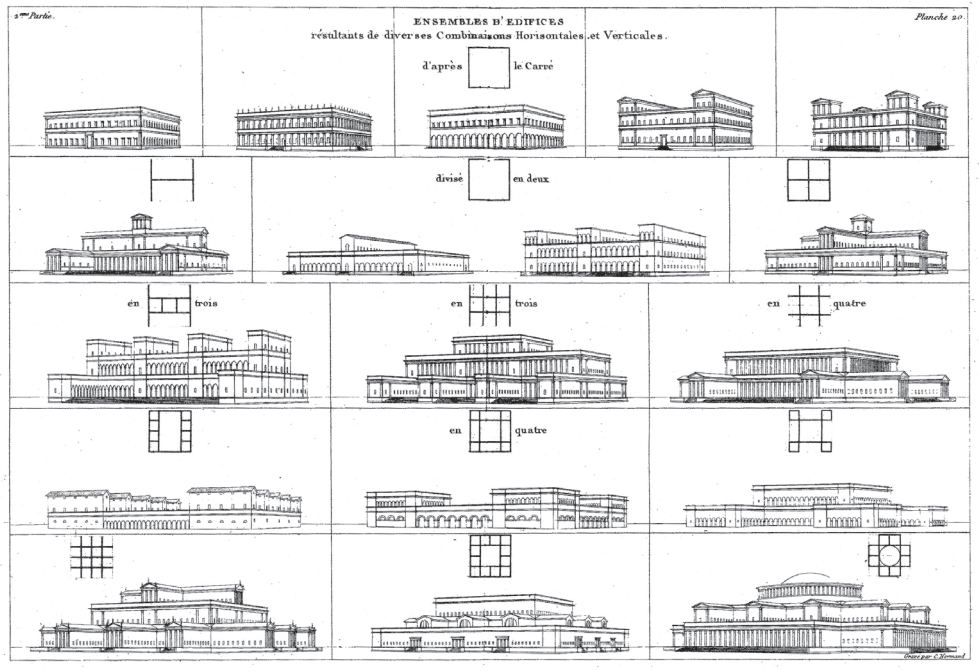

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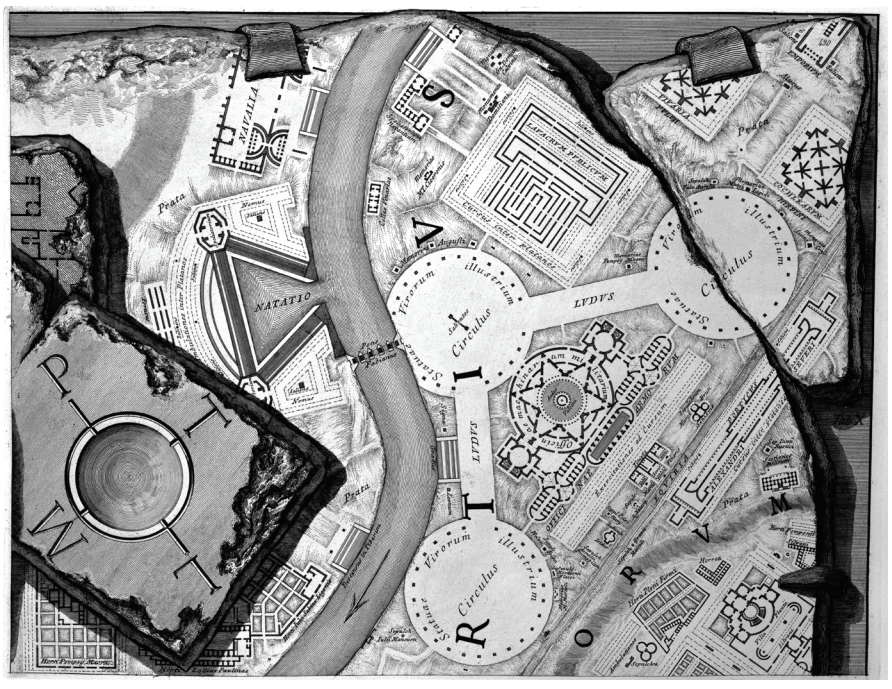
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socio-political and cultural relations, as suggested by Alberto Pérez-Gómez and Louise Pelletier in their discussion on perspective and axonometry in *Architectural Representation and the Perspective Hinge*:

> We may remember that the "subject" of traditional perspective representation (and pre-revolutionary European architecture) was always an active, embodied observer, never totally disconnected from the world's passions and motions, willing to acknowledge and remain subordinate to the larger orders of nature and politics. Axonometry, on the other hand, addresses a disembodied observer in pursuit of individual prosperity, freedom, and pleasure - a passive observer for the first time capable of self-conscious disengagement from the limits granted by the body and the world.[11]

The term "axonometry" was coined in the late nineteenth-century, and joins the words axis and metria (for measurement), but axonometry as representation is also pre-modern as has been discussed by Scolari in *Oblique Drawing*.[12] Scolari has explained, for instance, that axonometric drawing was used to describe fortification architecture and valuable for both its visual and informational purpose. Intention is both visualised, and can be measured in scale. One of the visual qualities of axonometry is its abstract aesthetic, which seemingly fascinated Le Corbusier, who reproduced a number of Auguste Choisy's axonometric drawings in *Vers une architecture*.[13] Le Corbusier, as is well known, also included his own line drawings, travel sketches, and photographs.

Fig. 2.4.
Fig. 2.5.

In *Vers une architecture*, the juxtaposition of photographs and text is as important to the argument as the text itself. We get images of engineering works including bridges, grain elevators, factories, airship hangars as well as ships, planes, and cars, mixed with historical monuments like Notre Dame, Arc de Triumphe, the Colosseum, Pantheon and the Parthenon as well as Roman ruins. The moral and aesthetic virtues of modern engineering, the achievement of unity and measurement, the satisfaction of the mind, all mix as Le Corbusier puts forward an architecture that goes beyond utilitarian needs, and is a "creation of the mind."[14] He does this by starting with the house as a problem of the epoch, to be tackled through rational logic akin to the logic of industrial production.

Fig. 2.6.

This ethos is embodied in the paintings of Le Corbusier. Their composition follows a rational logic with an inventory of visually recognisable *object-types*, including the following: bottles, glasses, jugs, pitchers, plates, guitars, and pipes. As von Moos has remarked, these objects of mass-production, symbolised the virtues of an industrial world of order, anonymity and purity.[15] The term "purism" was selected because Ozenfant and Le Corbusier considered it to stand for the characteristic of modern thought. We can note that the paintings of Le Corbusier used recognisable objects, but reduced to their formal outlines and placed in abstract compositions. It is notable because at the same time Le Corbusier was producing these paintings, the photomontage artists such as George Grosz and John Heartfield developed their own method of depicting the character of the period.

Fig. 2.7.

In photomontage, and by extension collage and montage, ready-made images such as photographs, newspaper and magazine cuttings, are pasted together with other material such as lettering and drawings to form new compositions through purposeful juxtapositions. Images are isolated from their original context and then integrated within a new system of other isolated images in order to produce new connections through a chain of associations. The film maker Sergei Eisenstein proposed that with the method of montage any two sequences, when juxtaposed, combine into another concept which arises from that juxtaposition as something qualitatively new.[16] Characteristic of the photomontage then is that referential figures and objects as well as abstract symbols, are collapsed within a single image. Appearance gives way to any number of unseen relations.

Heartfield and Grosz are considered to have invented photomontage around 1916, although the exact date is debated. As is the claim to original authorship, with Raoul Hausmann claiming to have invented the technique at the same time. We should recognise a number of things about the photomontages of Heartfield, Grosz, Hausmann, and others. First, photomontage was a reaction against the unrepeatability of painting, in particular the time consuming process of oil painting, which was considered private and exclusive. Instead, photomontage belonged to a new Fordist era of mechanical reproduction, and mass communication. The term *photomontage* itself means "to assemble," and in German *montage* refers to "assembly line."[17] Secondly, the aim of these artists was to produce work that was absorbed with the fabric of everyday life, as Hobsbawm has pointed out.[18] Thirdly, the origins of photomontage, in particular those of Heartfield and Grosz, are significant because of their political content.

In Grosz's montage *My Germany* (1920), two soldiers are placed within the heart of a figure, from whose head are positioned a number of news headlines about the economy. For instance, one cutting reads, "100000 Mark." In Heartfield's *A Pan-German* montage, a passive Pan-German leader is placed over a police archive photograph of a murder victim. War and economy were persistent themes in photomontage works of this period.

Fig. 2.15.
Fig. 2.8.

A crucial part of the conceptual and formal quality of photomontage is that every image has been cutout from "as found" material, so every image has a familiar photographic appearance. At times, it is as if we are looking at a piece of documentary photography. As John Berger has said in his discussion on photomontage, "we are still looking first at *things* and only afterwards at symbols."[19] Thus, in montage the material and immaterial are collapsed within the image.

The photomontage works of Mies are an interesting example of photomontage in architecture. In his montages, the freestanding wall, or a painting, or a museum artefact are placed over a background image. In *Museum for a Small City*, Mies placed photographs of actual material such as stone or onyx onto an otherwise featureless background so emphasis was placed on the architectonic quality of the wall as a specific architectural element, leaving the background almost invisible. At other times, Mies removed parts of the background image, such as in the photomontage *Concert Hall Project.* Here, the relentlessly rational grid of the Albert Kahn factory is contrasted with the sculpted figure, and the curved wall which float freely. In these two examples there is a tension between an excess of form and the reduction of form, what does and does not exist. It is interesting that Mies' photomontages, like his built works, reveal a serial repetition that use only a few specific elements, continuously reproduced, and subjected to continual self-critique. In Dal Co's essay on Mies entitled "Excellence: The Culture of Mies as Seen in his Notes and Books," repetition is linked with the concept of tradition. "Tradition is not the amicable side of the past," Dal Co writes, "but the troubling closeness of what stands in the distance."[20] Thus, tradition is both what is close and distant, "nothingness and excess" as Dal Co writes, simultaneously pastness and presentness. Both conditions are superimposed in Mies' photomontages.

Fig. 2.10.
Fig. 2.11.

A different kind of presence and distance is at work in the theoretical drawings of Hilberseimer, who was a long term collaborator with Mies.[21] The harsh graphic language that Hilberseimer presents in projects such as the those for mass-housing, the Chicago Tribune competition and the Berlin city centre development suppress the form and function relationship which was prevalent at the time. Instead a clear formal definition is put forward in Hilberseimer's perspective views and axonometric drawings which Hays reads in *Modernism and the Posthumanist Subject* as a relentlessly persistent serial order, "without subjectivity."[22]

Fig. 2.12.

In the 1960s, drawings were used by architects such as Archizoom and Superstudio in Italy, and later with a similar visual language, OMA in the 1970s and 1980s to put forward theoretical projects with intentionally critical positions. Archizoom, for instance, combined a technologically progressive aesthetic with critical and ironic rhetoric for global urbanisation in the "No-Stop City," as an exaggeration of the current condition. An infinite grid of services and car park spaces intentionally "without architecture." Reflecting on this project in *Weak and Diffuse Modernity*, Branzi has said that Archizoom, "opened a reflection

Fig. 2.13.

11. Alberto Pérez Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge, Mass.: MIT Press, 2000), p. 316. First published in 1997.

12. Massimo Scolari, *Oblique Drawing: A History of Anti-Perspective* (Cambridge, Mass.: MIT Press, 2012).

13. See Le Corbusier, *Toward an Architecture*, trans. by John Goodman (London: Frances Lincoln, 2008), pp. 117–120 and pp. 134–135. Originally published in France under the title *Vers une architecture*, 1923. Also refer Jean-Louis Cohen's Introduction, in particular pp. 17–23. For Choisy, see Auguste Choisy, *Histoire de L'architecture* (Paris: Edouard Rouveyre, 1899).

14. See for example, Le Corbusier, *Toward an Architecture*, p. 85.

15. Stanislaus von Moos, *Le Corbusier: Elements of a Synthesis* (Rotterdam: 010 Publishers, 2009), p. 48. Originally published in German, 1968.

16. See in particular Sergei Eisenstein, 'On Montage' (1938), in *Towards a Theory of Montage: Sergei Eisenstein Selected Works Volume 2*, ed. by Richard Taylor and Michael Glenny, trans. by Michael Glenny (London: IB Taurus, 2010), pp. 296–326.

17. Dawn Ades, *Photomontage* (London: Thames and Hudson, 1996), p. 12. First published in 1976.

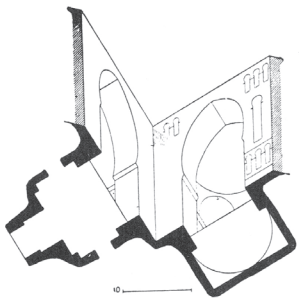
18. Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century, 1914-1991* (London: Abacus, 1995), p. 181. First published in 1994.

19. John Berger, 'The Political Uses of Photo-Montage', in *John Berger Selected Essays*, ed. by Geoff Dyer (London: Bloomsbury, 2001), p. 221. Original essay from 1969.

20. Francesco Dal Co, 'Excellence: The Culture of Mies as Seen in His Notes and Books', in *Mies Reconsidered: His Career, Legacy and Disciples*, ed. by John Zukowsky (Chicago: Rizzoli International, 1986), 72–85, (p. 82).

21. Richard Pommer, David Spaeth and Kevin Harrington, *In the Shadow of Mies: Ludwig Hilberseimer Architect, Educator, and Urban Planner* (Chicago, Ill.: Art Institute of Chicago with Rizzoli International Publications, 1988), p. 6. Also see Pier Vittorio Aureli, 'Architecture for Barbarians: Ludwig Hilberseimer and the Rise of the Generic City', in *AA Files 63* (London: Architectural Association, 2011), pp. 3–18.

22. K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer* (Cambridge, Mass.: MIT Press, 1995), p. 176. First published in 1992.



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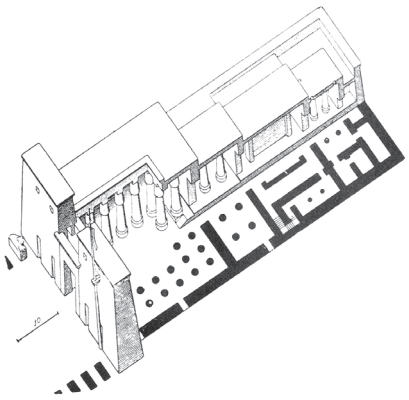

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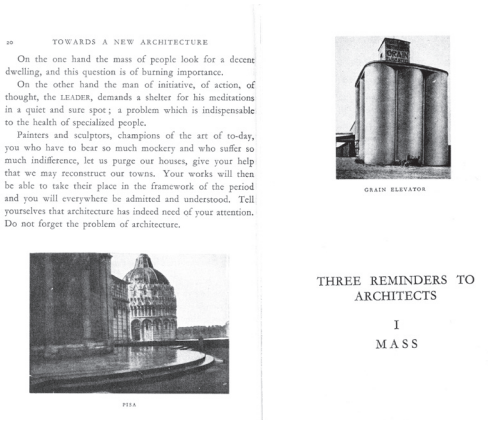

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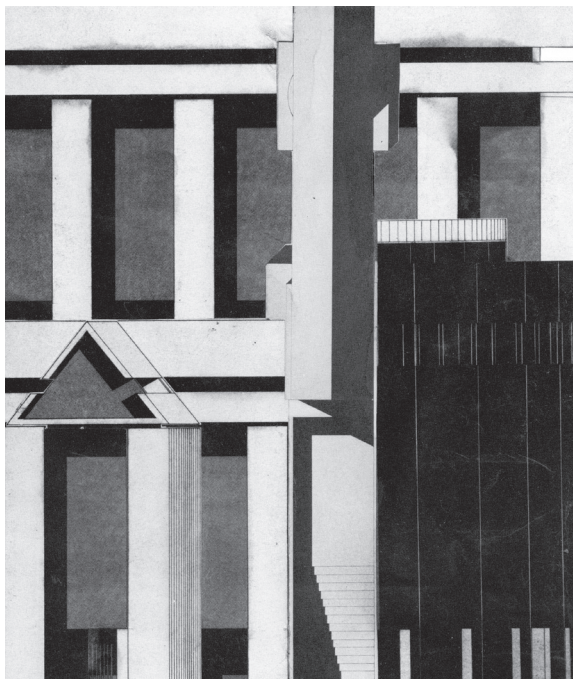

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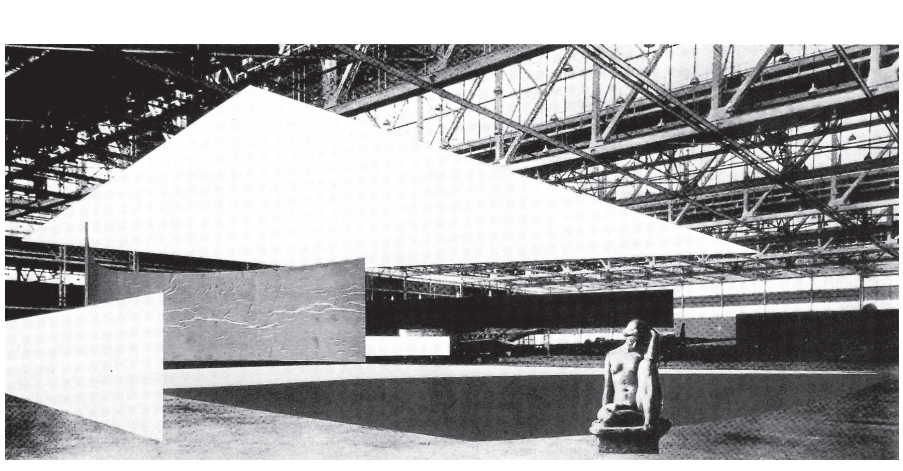

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2.4-2.6. Le Corbusier, Extracts from Towards an Architecture, 1923. Axonometric drawings by Choisy and used by Le Corbusier. Page spread juxtaposes Pisa Baptistry and a grain elevator.
2.7. Le Corbusier, Nature morte au siphon, 1921. Still life with bottles, guitars, ciphon, some of what Le Corbusier called objet-types.
2.8. John Heartfield, A Pan-German, 1933. Photomontage.
2.9. Aldo Rossi, Composizione n. 3, 1968. Collage of Rossi's projects showing the triangular-topped colonnade and theatre of his Paganini project in Parma, with a plan of Segrate Monument at the centre, superimposed on the elevation of the Pilotta Square colonnade at a different scale.
2.10-2.11. Mies van der Rohe, Museum for a Small City and Project for a Concert Hall, both 1942. Photomontages. In the Museum montage, the specific objects are the focus and the architecture remains in the background. In the Concert Hall montage, the formal quality of the montage is reversed so we read the planes cut out of the background, yet the background is industrial.

on the contemporary city, seeking to rid from our research all those questions regarding linguistic, formal, or composite problems that are so typical of the discipline."[23] In their study drawings for this project, formal and typological aspects are reduced to a grid of dots, dashes, and lines, made on a type-writer, and representing the global flow of information. Quality is eliminated, and instead a "non-figurative architecture" is proposed for a "non-figurative society" centred on the production and consumption of industrial goods and the endless grid of the No-Stop City reflects the global reach of the marketplace.

Up to this point, we have outlined a selection of examples in the development of architectural notation, supplemented with some brief reflections on photomontage and painting. We have focused on the techniques and formal qualities of the drawings and images selected, considering the visual language of plan, section, elevation, perspective, axonometric, and variations of montage. We have said that the production of images also represent through their appearance any number of unseen relations, such as cultural factors that give rise to a particular image and method of representation. We need to therefore remember that drawings as images are not neutral, but material entities that embody both the values and ideas of the producer, and the ethos of the era in which that image was produced.

As we are attempting to delineate the methods of inquiry, let us end this section by saying that the importance in producing images, whether as line drawings, paintings, or montages, is that images bring theory into form. They are simultaneously theoretical and formal speculations, which are a method of analysis, criticism, design, graphic persuasion, and knowledge transmission. In the next section, we will focus on the production of images in the work of Rossi. In doing so, we will try to draw out the relation between theoretical and formal speculation.

In Dialogue with Rossi

As has been said, this PhD consists of a close engagement with the texts, images, and buildings of Rossi. A dialogue has been created by visual and textual means. This dialogue began by producing drawings and images to study Rossi's work, and analyse the theory he put forward in his writings, drawings, and buildings. The dialogue was extended to reading Rossi's referred texts and their references. Travel was undertaken to visit Rossi's buildings and the buildings and projects he cites. Let us now turn to a selection of Rossi's drawings.

In 1979, the IAUS held an exhibition of drawings by Rossi, under the title *Città Analoga*, which Eisenman edited and wrote an essay.[24] The exhibition catalogue documents the thirty images that were exhibited along with Eisenman's essay and two shorter writings by Rossi. It is with the visual documentation that we can get a sense of Rossi's visual language.

Tapered and stepped towers and blocks, silos and smoke stacks, coffee pots and match boxes, airships and shadowy figures. This is the material of Rossi's drawings and montages. This stock of imagery is drawn with formally reduced versions of Rossi's own projects and parts of his projects, as well as geometrical volumes such as truncated cones and hollow cubes. Schools and cemeteries, housing and theatres, stairs and porticoes form an assemblage of urban types, domestic objects, and singular forms.

Fig. 2.14.
Fig. 2.9.

Eisenman brings our attention to the relationship between Rossi's drawings and those of Giorgio de Chirico and Mario Sironi. Others have done so and we could cite Enzo Bonfanti and Vittorio Savi, as well as Moneo, Scully, Rykwert, Johnson, and Lombardo, as notable commentators.[25] Scully for instance, has commented that it is the "mystery of remembrance" in de Chirico that influences Rossi, implying the similar enigmatic character of drawings by Rossi and de Chirico. Johnson has commented on de Chirico's repeated use of the smokestack and its frequency in drawings and buildings by Rossi. Eisenman distinguishes the drawings by de Chirico and Sironi as drawings "of" architecture, while Rossi's drawings "are" architecture, because they contain the actual material of Rossi's architecture.[26] That is to say, the "primary elements," the "monuments," the "locus," which Rossi describes in *The Architecture of the City*. This notion of the drawing as architecture is in keeping with what we have already discussed in relation to Alberti. In this sense, when Rossi describes analogical architecture he is describing the concrete and material parts of the city which are the analogues of his drawings.

While Rossi acknowledges the "de Chirico-like element" in his drawings, he has remarked elsewhere that his influence is Sironi and Morandi.[27] Rossi has commented that he has also been influenced by Hopper, Egon Schiele, Ernst, and the films of Fellini and Pasolini.[28] It is interesting to note how some of the visual language of these artists is present in the language of Rossi's drawings and other images. From de Chirico we could note the temporal element suggested by the low shadows. From Sironi, we could cite his focus on depicting the city periphery with its cranes and chimneys, factories, pylons, and tenements. From Hopper, Rossi borrows an interest in the interior. From Morandi, Rossi follows the ambiguities of scale inherent in the still life paintings of bottles and jugs painted as simple volumes composed as table top cityscapes. From Schiele, we could cite the frenetic, wiry, and taught linework, along with Schiele's unhappy visions. We can note Ernst's visual novel *Le Femme 100 Tetes*, ("*The Hundred Headless Woman*"), which comprises a series of collages describing various city scenes using images from eighteenth-century books and magazines as a base background, onto which other images are placed.[29] While each of the background images acts as a city backdrop, the elements that are placed on top, are clearly different. The backdrop is darker in tone and has a denser graphic texture, while the object placed on top is usually lighter in tone, and often only an outline. The background can be read as the typical frame of the city, while the object placed on top is the singular event. We see a visual and formal tension that embodies an intellectual confrontation.

Fig. 2.16.
Fig. 2.17.

This stock of imagery: de Chirico's shadows, Sironi's periphery, Morandi's scaleless volumes, Hopper's interiors, the technique of Schiele, Ernst's collages, and the film montages of Fellini and Pasolini, is embedded in Rossi's drawings and projects. Although we speak in advance of discussion to come, these forms, along with the forms appropriated from early Modern Movement figures like Hilberseimer, Le Corbusier, and Loos, are the formal supports that contain Rossi's theory of the city. We will discuss this further in relation to Rossi's project for the Modena Cemetery, so let us say for now that Rossi connected the technique of collage, with the concept of the analogical city. He said this because one aspect of the analogical city is for a compositional procedure that selects, isolates, and combines elements within an analogical system of reference. Thus, urban types such as the palazzo, and industrial buildings such as the factory can be combined like images in a collage, where the significance of the work is unforeseen until the end of the operation. In this sense the technique of collage overlaps with the architectonic imagination. At this stage let us be clear that this is different to the definition of collage and architectonic thinking put forward by Rowe and Koetter in *Collage City*.[30] Rowe and Koetter always begin and end with geometric pattern-making, thinking by figure and ground, and always seeking something of the pre-modern. This is by contrast to Rossi's thinking, which should be considered as starting from a particular image of a general urban type, before being actualised as a formally reduced but definitive singular form that has undergone a rich analogical process that mixes the history of architectural types and the singularity of an authorial language.

Rossi has said that his drawings are a means to study his new and former buildings in relation to one another.[31] Through the repetition of images, each of Rossi's drawings are in dialogue with the preceding and succeeding drawing, to Rossi's preceding and succeeding projects, as well as to architecture and the city as a whole. We see a combination of formally recognisable images of real

23. Andrea Branzi, *Weak and Diffuse Modernity: The World of Projects at the Beginning of the 21st Century* (Milan; London: Skira, 2006), p. 70.

24. See Aldo Rossi, 'Introduction', in *Aldo Rossi in America: 1976-1979*, trans. by Diane Ghirardo (IAUS New York: MIT Press, 1979), pp. 2–3. Peter Eisenman, 'The House of the Dead as the City of Survival', in *Aldo Rossi in America: 1976-1979* (IAUS New York: MIT Press, 1979), pp. 4–15.

25. Enzo Bonfanti, 'Elementi e Costruzione: Note Sull'architettura Di Aldo Rossi', in *Scritti di architettura*, ed. by Luca Scacchetti (Milan: Clup, 1981), pp. 281–296; Vittorio Savi, *L'architettura di Aldo Rossi* (Angeli, 1976); Rafael Moneo, 'Aldo Rossi: The Idea of Architecture and the Modena Cemetery', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984* (New York: Princeton Architectural Press, 1976), pp. 105–134; Vincent Scully, 'Postscript: Ideology in Form', in *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981), pp. 111–116; Joseph Rykwert, 'De Chirico: The Architecture', in *Giorgio de Chirico Metafisica y Arquitectura* (Milan: Skira, 2007), pp. 523–525; Eugene J. Johnson, 'What Remains of Man: Aldo Rossi's Modena Cemetery', *Journal of the Society of Architectural Historians*, 41 (1982), 38–54; Patrizia Lombardo, 'Always Resound the White Walls of the City', in *Three Cities* (Milan: Rizzoli, 1984), pp. 23–34.

26. Peter Eisenman, 'The House of the Dead as the City of Survival', in *Aldo Rossi in America: 1976-1979* (IAUS New York: MIT Press, 1979), pp. 4–15. Also see Peter Eisenman, 'The Houses of Memory: The Texts of Analogy', in *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), pp. 2–11 where Eisenman writes: "The architectural drawing, formerly thought of exclusively as a form of representation, now becomes the locus of another reality. It is not only the site of illusion, as it has been traditionally, but also the real place of suspended time of both life and death. ... In this way it and not its built representation, becomes architecture... ."

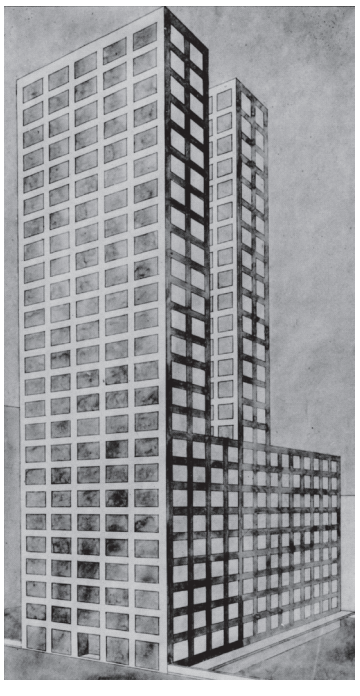
27. Carlos Jimenez, 'Mystic Signs: A Conversation with Aldo Rossi', *Cite*, 1990, 16–17.

28. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), for example: p. 5 and p. 72; Aldo Rossi, 'Autobiographical Notes on My Training, Etc. December 1971', in *Aldo Rossi: The Life and Works of an Architect*, trans. by Laura Davey (Köln: Könemann, 2001), pp. 23–25; Aldo Rossi, 'The Architecture of Adolf Loos', in *Adolf Loos, Theory and Works*, ed. by Benedetto Gravaguolo (London: Art Data, 1995), pp. 11–23.

29. Max Ernst, *The Hundred Headless Woman = La Femme 100 Têtes*, trans. by D. T. Ernst (New York: G. Braziller, 1981). First published in 1929.

30. Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass.: MIT Press, 1983). First published in 1978.

31. For example see Aldo Rossi, 'La Città Analoga: Tavola / The Analogous City: Panel', *Lotus International*, 13 (1976), 4–9.



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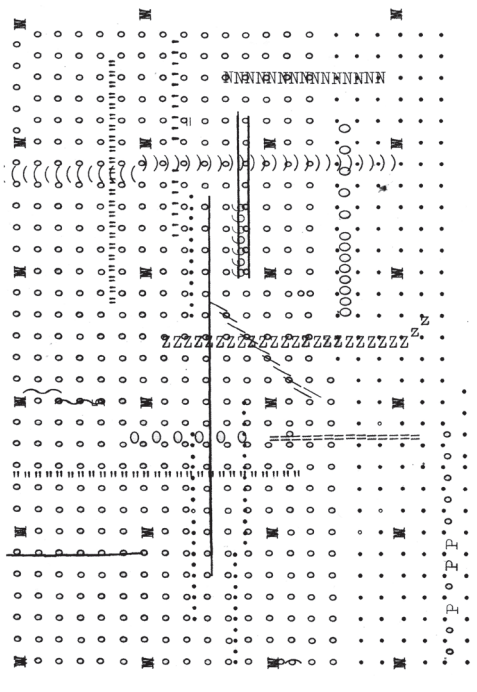

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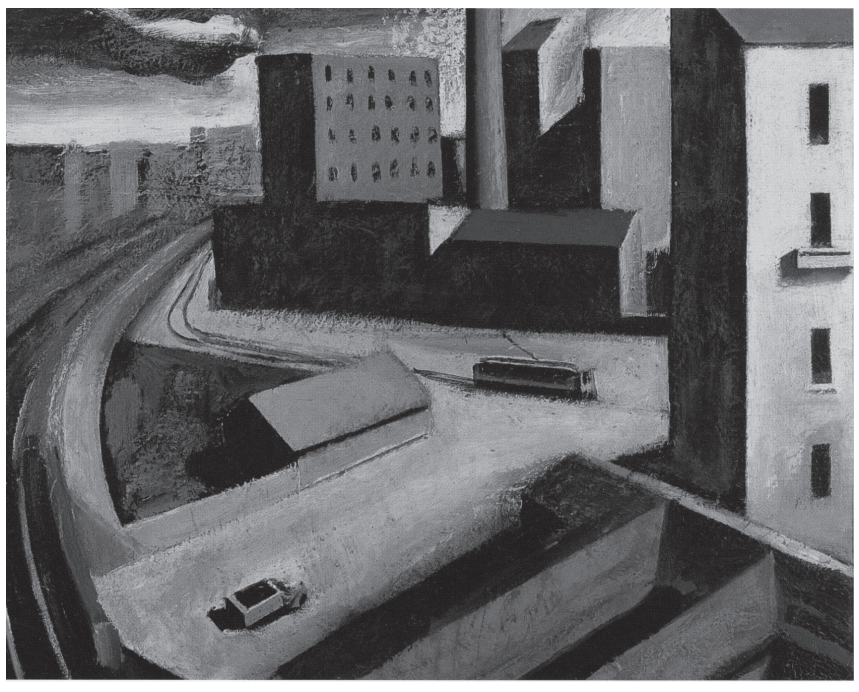

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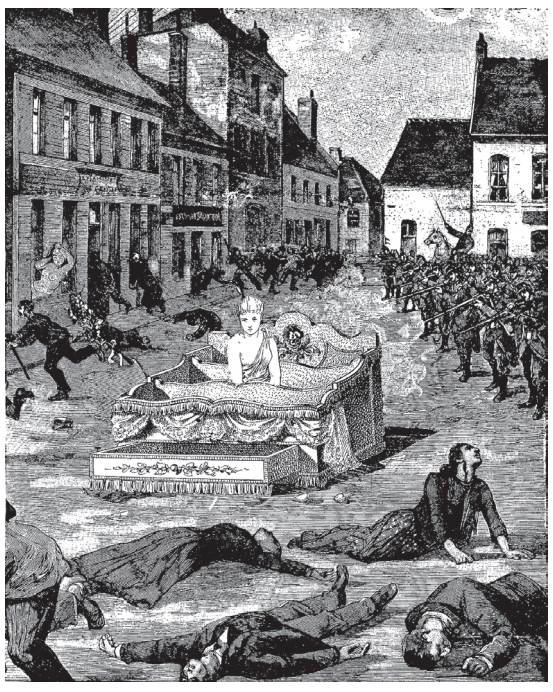

2.17.

2.12. Ludwig Hilberseimer, Chicago Tribune Competition, 1922. Reduced and clearly defined formal and visual language.
2.13. Andrea Branzi, typewritten study made in 1968 for the Archizoom project No-Stop City, of 1972. It represents the urban territory crossed by flows of information.
2.14. Aldo Rossi, Studio px l'architecture assassinée, 1974. Coffee cups, cigarette packets, the newspaper are habitual elements within the everyday life of the city. They mix with tenement buildings and city ruins as a figure watches over.
2.15. George Grosz, My Germany, 1920. Associations of war and economy, mixed with ink drawing and newspaper headlines.
2.16. Mario Sironi, Urban Periphery, 1920-21. The cubed building and the chimney connote Rossi's own formal language.
2.17. Max Ernst, from La femme 100 têtes, 1929. A visual novel of captioned collages that combine nineteenth-century engravings from novels, natural science books and artwork reproductions, to describe 147 city scenes.

things, set within a cityscape that is non-real. It recalls something that Paolo Virno has said in *A Grammar of the Multitude.* Virno writes, after Marx, about the reification of thinking, "a thought becoming a thing," which is, as Virno terms it, a *real abstraction*.[32] We can compare this with the following statement by Rossi in "An Analogical Architecture:" "The question of things themselves," Rossi writes, "whether as compositions or components - drawings, buildings, models, or descriptions - appears to me as increasingly more suggestive and convincing."[33] In the production of images, whether as drawings, collages, or montages, we bring theory into form.

Literary Montage, Language, and Conceptual Vocabulary

We can say that an equivalent literary-based process of collage, is literary-montage. "Probably," as Eliot has said, "the larger part of the labour of an author in composing his work is critical labour; the labour of sifting, combining, constructing, expunging, correcting, testing: this frightful toil is as much critical as creative."[34] Through careful and purposeful reading of texts, categories and concepts can be extrapolated, then combined with other readings to construct something else.

In "The Function of Criticism," Eliot discusses comparison and analysis as tools of criticism.[35] He begins the essay with a reflection on a prior essay "Tradition and the Individual Talent" in which Eliot wrote of the relationship of the new to the old in art and literature: "... the past should be altered by the present as much as the present is directed by the past."[36] Eliot, writing as a literary critic and poet, considers the literature of the world, of Europe, of a single country, not as a collection of individual works of literary art by individual artists, but as a constellation of singular aesthetic and historical examples: "systems in relation to which, and only in relation to which, individual works of literary art, and the works of individual artists, have their significance."[37] To understand one particular instance within this system of relations, we need to select that instance and place it in comparative relation to the others. Such a process is one of selection, isolation, and re-integration into an overall system. This critical and creative literary-based process produces another connection and is a form of both analysis and synthesis, which we can call montage.

Referring to the opening paragraphs of this chapter, we can bring the separate categories of practice and theory, of image and word into unity. In the first chapter of *The Political Unconscious* Fredric Jameson puts forward the concept of *transcoding* to describe the strategic choice of a set of terms used to analyse and articulate distinct kinds of objects, which he describes as "two very different structural levels of reality."[38] Jameson conceives transcoding as a way to establish relationships and connections between seemingly disparate phenomena. To mediate, for example, the formal analysis of a work of art and its social background, or the internal dynamics of the political state and its economic base. In our case, the separate languages of image and word. Two separate domains are brought into a closer relation. For Jameson, transcoding is an analytical device that overcomes the, "fragmentation and autonomisation, the compartmentalisation and specialisation of the various regions of social life."[39] Transcoding is a useful interpretive concept for understanding the unity of image and word, of practice and theory, and when we extend it further, of how we can productively transcribe the terminology of others to help us define our own conceptual vocabulary.

With transcoding as a form of literary-montage in mind, let us now turn to Giorgio Agamben's discussion in *The Signature of All Things* on the idea of *paradigm* as a method of research.[40] Agamben discusses the concept of "paradigm," but he uses "example" with relative equivalence: "Paradigms obey not the logic of the metaphorical transfer of meaning but the analogical logic of the example."[41] Agamben adds that, "the paradigm is a singular case that is isolated from its context only insofar as, by exhibiting its own singularity, it makes intelligible a new ensemble, whose homogeneity it itself constitutes."[42] What we can take from this, is that the paradigm, henceforth *example*, can be considered autonomous and complete in itself. As Agamben says, the example constitutes a form of knowledge that proceeds neither by deduction from the general to the particular, nor proceeds by induction from the particular to the general, but from the particular to the particular. That is to say from the singularity of each autonomous and particular case.

In these opening pages, we have mentioned on several occasions the term "category," and the term "keyword." We have also highlighted the terms "real abstraction," "transcoding," and "example." In the chapters that follow certain terms are emphasised as a way to understand, connect, and produce new insight about certain ideas. A few words on language, and the significance of language, is necessary.

Human communication in the post-Fordist era has become the basis of production, loaded as it is with what Virno has described as, "*ethos*, culture, linguistic interaction."[43] Architecture spatialises this ethos, the shared customs of any given culture, the memory and sociability of a people, their aesthetic inclination, and the common human faculty of language. As Virno says, the "life of the mind" becomes in itself exterior and collective.[44] Marx presents a notion of the exteriority of language as social character in the *Grundrisse*, which he terms, *general intellect.* Marx writes,

> Nature builds no machines, no locomotives, railways, electric telegraphs, self-acting mules etc. These are products of human industry; natural material transformed into organs of the human will over nature, or of human participation in nature. They are *organs of the human brain, created by the human hand*; the power of knowledge, objectified.[45]

The emphasis is by Marx, but it equally brings attention to the exteriority of human knowledge through social participation. Here, in the form of products such as machines and railways. Marx goes on to say that "social knowledge" has become a direct force of production. "Social life itself," has, as Marx continues, "come under the control of the general intellect and been transformed in accordance with it."[46] General intellect is thus discussed in terms of a social process of knowledge production and also as social life in general, which includes human communication through language.

Freud has discussed the exteriority of human faculties such as language. In *The Uncanny* Freud searches for the "common core" of fear, and puts forward the conceptual category of *unheimlich*, literally "unhomely" and translated as *uncanny.* For Freud the uncanny distinguishes a commonly shared and collectively held, but "special feeling" within the field of what is frightening.[47] It stands for something that is familiar, yet to some degree also unfamiliar, and it is through language that we can discuss this dual quality.

Before ending our discussion on literary montage, let us turn briefly to Walter Benjamin, from whom the term "literary montage," is borrowed. As he states in *The Arcades Project*: "Method of this project: literary montage. I needn't *say* anything. Merely show. I shall appropriate no ingenious formulations, purloin no valuables. But the rags, the refuse - these I will not describe but put on display."[48] Benjamin's unfinished *Arcades Project* was to be made up entirely of quotations "put on display," which is to say, words given visual form. Each quotation was Benjamin's way of writing about history: "To write history thus means to *cite* history," he said.[49] Thus, literary montage was connected with history, because Benjamin's meta-project was to read the character of the nineteenth-century and how the social and political condition of that era was manifest in material things including works of art and buildings.

Benjamin's technique of literary-montage was combined with his concept of the *dialectical image.* Of this latter concept, Benjamin wrote that the

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32. Virno, *A Grammar of the Multitude*, p. 64.

33. Aldo Rossi, 'An Analogical Architecture', *A+U: Architecture and Urbanism*, trans. by David Stewart, 65 (1976), 74–76 (p. 74).

34. Thomas S. Eliot, 'The Function of Criticism' (1923), in *Selected Essays* (London: Faber, 1932), pp. 23–34 (p. 30).

35. Eliot, 'The Function of Criticism (1923)', in *Selected Essays* (London: Faber, 1932).

36. Eliot, 'The Function of Criticism', p. 23. Also see Thomas S. Eliot, 'Tradition and the Individual Talent' (1917), in *The Sacred Wood and Major Early Essays* (Mineola, New York: Dover Publications, 1998), pp. 27–33 (p. 28).

37. Eliot, 'The Function of Criticism', pp. 23-24.

38. Fredric Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (London: Methuen, 1986), p. 40. First published in 1981.

39. Jameson, *The Political Unconscious*, p. 40.

40. Giorgio Agamben, 'What Is a Paradigm?', in *The Signature of All Things: On Method*, trans. by Kevin Attell and Luca D'Isanto (New York: Zone Books, 2009). First published in 2008.

41. Giorgio Agamben, 'What Is a Paradigm?', in *The Signature of All Things: On Method*, trans. by Kevin Attell and Luca D'Isanto (New York: Zone Books, 2009), p. 18. First published in 2008.

42. Agamben, 'What Is a Paradigm?', p. 18.

43. Virno, *A Grammar of the Multitude*, p. 24. Italics are Virno's.

44. Ibid., pp. 36-37.

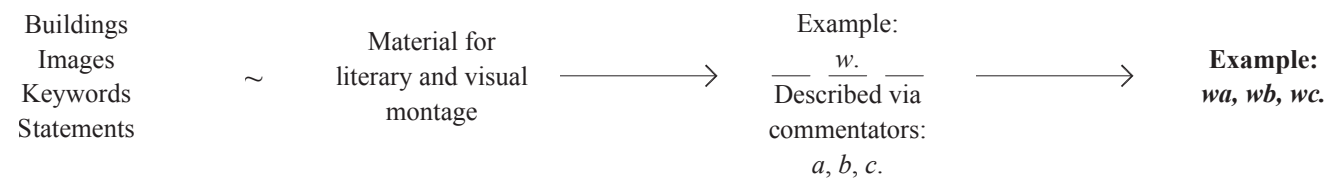
45. Karl Marx, *Grundrisse: Foundations of the Critique of Political Economy (Rough Draft)*, trans. by Martin Nicolaus (Harmondsworth: Penguin Books, 1973), p. 706. A series of notebooks written in winter 1857-58, and not published until 1953.

46. Marx, *Grundrisse*, p. 706.

47. Sigmund Freud, 'The Uncanny' (1919), in *The Standard Edition of the Complete Psychological Works of Sigmund Freud: An Infantile Neurosis and Other Works (1917-1919)*, trans. by Anna Freud, James Strachey, and Alix Strachey (London: Hogarth, 1955), Vol. 17, 219–252 (p. 218).

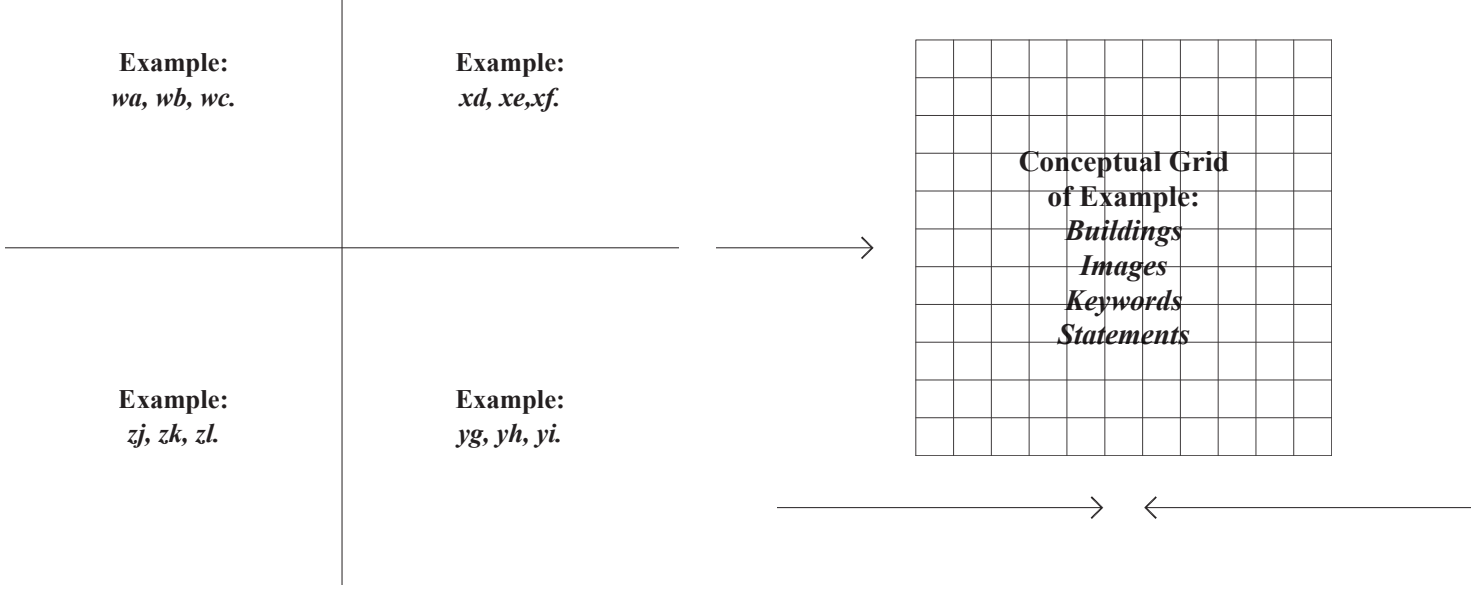
48. Walter Benjamin, *The Arcades Project*, trans. by Kevin McLaughlin and Howard Eiland (Cambridge, Mass.: Harvard University Press, 1999), p. 860. Translation of Walter Benjamin *Das Passagen-Werk*, ed. by Rolf Tiedemann, 1982. The italics are Benjamin's.

49. Benjamin, *The Arcades Project*, p. 476. Benjamin's italics.



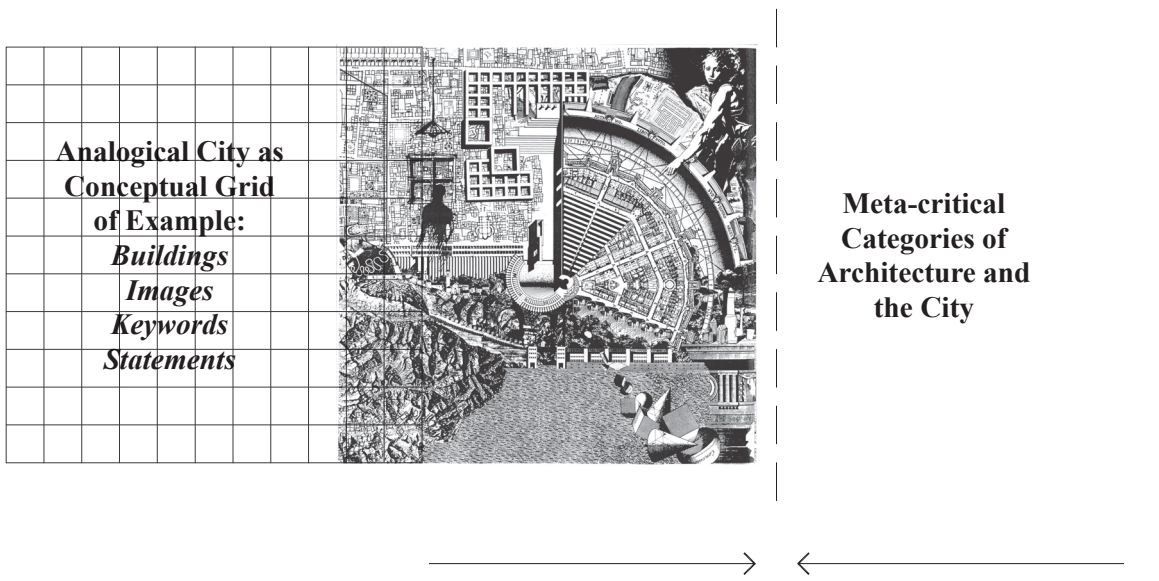
Selection and isolation of a particular example.

2.18.



Integration of different examples described by different commentators. The conceptual grid is the framework within which particular examples are montaged.

2.19.



2.20.

General diagrams of the methodology.
2.18. Diagram indicating the selection and isolation of any single example of a building, image, keyword, or statement, which is the material of the thesis. Each singular example is described and placed in relation to similar examples, and the argument is developed using these examples.

2.19. Integration of separate and isolated examples within a conceptual grid, viewed here as a conceptual framework.
2.20. This process is undertaken within the framework of the analogical city concept, here represented as the merging of the grid onto Rossi's collage. The view is then to provide new insight into Rossi's work and build on existing meta-critical categories of architecture such as ideas about the city, type, autonomy, history, and the analogue.

image itself is "dialectics at a standstill."[50] The dialectical image is an image of the past coming together with the present to form, only momentarily, both past and present. It is dialectical because on one hand there is a *temporal* relation of the present to the past. On the other hand, there is what Benjamin calls, a *figural* relationship of the past to the present. This is a pictorial and material relation, which confronts the temporal. The dialectical image is the sudden, fleeting, and "shocking" montage of past and present, of hidden and forgotten, connected and illuminated only for an instant. At this moment we speak of a category in advance of a discussion to be had on Rossi's analogical city. We will later discuss Benjamin's dialectical-image within a framework that understands the category of history as collective imagination. A category that helps us understand Rossi's idea of collective memory and of the analogical city.

For Marx, Freud, and Benjamin, thought is not invisible, but, to varying degrees, thought, along with other human faculties like language, memory and affect, is external, and can be described through conceptual vocabulary. Thought is embedded in the material of the everyday. At the risk of again discussing matters in advance of their rightful place, it can be said that it is through the actualisation of *type* in architecture, that these common and collective faculties are made manifest; spatialised within the city.

As for our own discussion of language, keywords, the production and reproduction of categories, the following can be said. It is the view that in order to investigate any given concept (in our case Rossi's theoretical categories: city, type, autonomy, analogical city, and history as collective imagination) and to provide new insight into a particular concept, then it is productive to define, ideas, theoretical categories, and characteristics, from different areas of study, and from different authors, commentators, and thinkers. The method of inquiry should be understood as the interactivity of descriptive and conceptual vocabulary, building on existing language, correlating disparate ideas, and linking concepts by literary montage, concurrently with the production of images, as theory becoming form. In this sense, montage is the main literary and visual method of inquiry.

Research Framework

In the words and diagrams on the previous page, the term *example* is used as a general category that serves to define at any given time: a building, an image, a keyword, or a statement. It is these four components that are the main objects of study in this research, and each of which serve to refer to additional aspects. Thus: a building includes the built and unbuilt; a statement includes a quotation; an image includes a drawing, painting, photograph, montage; and a keyword includes a category, concept, characteristic, or opposition.

Fig. 2.18.

Let us now turn to the diagrams which have the purpose of explaining the methodology in sequence. We will start from the top of the page. In the diagram, "Example *w*" refers to any singular instance of, as has already been introduced, a building, image, keyword, or statement. For instance, an unbuilt building. This is the material for montage. "Example *w*" is then described by referring to any number of other commentators who have provided commentary on "Example *w*," the unbuilt building. Here indicated as "commentators *a*, *b*, *c*," and, these commentators have not been limited to architects and architectural historians and critics, but when appropriate, other cultural thinkers. Thus, at times a Freudian concept is useful, sometimes a notion by Foucault, at other times a statement by Tafuri. This results in a heterogeneous series of analyses of any single example, indicated as "Example *wa*, *wb*, *wc.*" These analyses are often a mixture of written description and visual documentation with the purpose of gaining understanding of a particular aspect of a theme. For instance theories of typology in architecture, or understanding the relationship of collective memory to the city.

The process described in the above paragraph is undertaken multiple times, with different examples, and different commentators. The diagram indicates the scaling up of one example into a conceptual grid of many other examples. Now, the purpose is to make connections between these examples: between buildings, between images, between keywords, and between statements. When we think of the concept of transcoding, then we can also consider interpretive leaps. So that a keyword in political theory, can help us to understand a particular aspect of Rossi's architectural production.

Fig. 2.19.

The conceptual grid is juxtaposed and superimposed onto Rossi's collage of the *Analogical City*, a visual transcription of the analogical city concept that he put forward first in 1969. It is placed in relation to my thinking on the methodology because the analogical city has served as a focal point for this research. Both as an object of analysis, and also as a conceptual framework in which the research has been undertaken. There is a similarity between the conceptual grid as a patchwork of single examples: buildings, images, keywords, and statements; placed in relation to the analogical city as a collage of single buildings and parts of cities, with their separate ideas and contexts, brought together within a single framework. Put another way, the analogical city becomes very much like a conceptual grid of examples.

Fig. 2.20.

As a final note on this method, it is worthwhile mentioning the development process of the diagram itself. It begins with a line drawing sketch study in pencil, and mixes lines, and words. It proceeds in the same way as we might develop an architectural plan. There is a compositional logic, for instance. Sets of categories, concepts, or characteristics are organised into more general categories. Oppositions are considered, so often there is a bilateral symmetry to the diagram itself, in the same way that there might be a bilateral symmetry to the plan of a certain type of building. By referring to categories in relation to characteristics of categories, there is also a hierarchy, as has been described by the general category of *image*, and its subcategories of: drawing, painting, photography, montage. In the case of the diagrams described above, the sketch study diagrams are redrawn using CAD software, and to the scale that they were drawn by hand. Referring once again to the diagrams described above, once they have been redrawn in CAD, they are then inserted into InDesign software, along with other images, such as that of the analogical city image. It is here that the text is written, and the line drawings and images are juxtaposed, superimposed, shifted and manipulated, according to the initial sketch study plan diagram. This process is similar to that undertaken in the producing of paper collages and photomontages, which has been the other primary visual method of this research. However, collages and photomontages are more often undertaken without a sketch study plan diagram, so are intentionally unplanned, and remain to a large extent spontaneous.

Fig. 2.22.

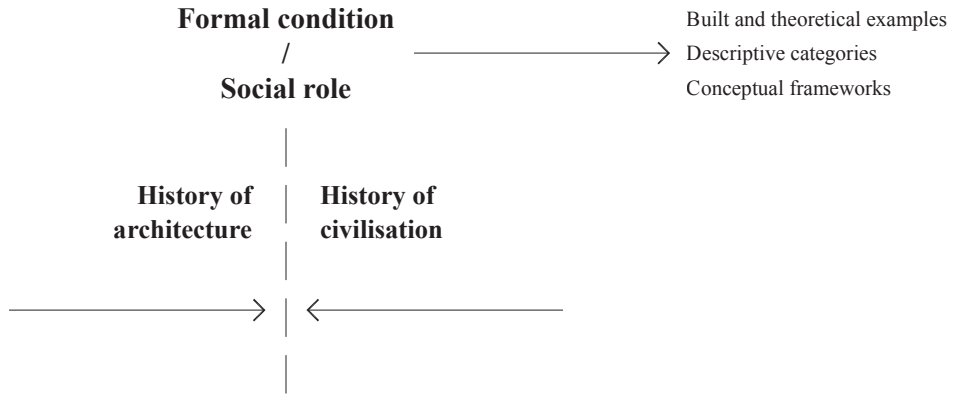
To summarise these words and to offer a meta-framework with which we hold in the background, the reader is referred to the conceptual framework opposite. The history of the city is also the history of civilisation so that the present is always historically determined. As the history of the city is the production of architecture, and the history of civilisation is the production of sociality, of subjectivity, then both architecture and culture interact. While our aim is to research into and put forward descriptive categories and conceptual frameworks, to understand built and theoretical work, we recognise that we also understand the significance of architecture as a producer of subjectivity.

Fig. 2.21.

Summary

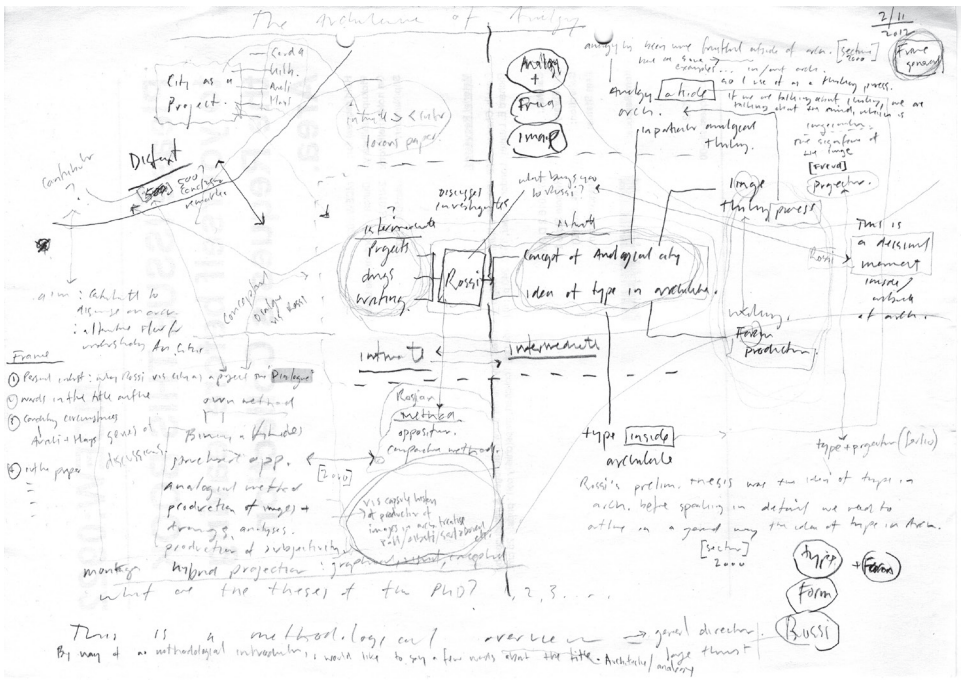
This chapter has delineated the primary research methods of visual and literary montage by putting forward a number of examples. In particular, we situated the production of images in architecture within a lineage dating from Serlio's grid in his first book of architecture on geometry and Alberti's notion that the drawing is architecture before the building is architecture. We turned to the bricolage of Piranesi, the descriptive drawings of Durand, Le Corbusier's paintings and Rossi's montage drawings, to name a few instances. For the literary equivalent of montage, we turned to Eliot on compiling, separating, and combining work as the methods of the critic. We mentioned Jameson's concept of transcoding as a way to mediate between two separate contexts, allowing the terminology of one context to inform another. We discussed Agamben's *example.* We referred to Benjamin's dialectical image as a concept that encapsulates past and present within a single figural and temporal instant. We also said a dialogue as been constructed with Rossi by visual and textual means. The next chapter is a portfolio of the author's work that documents the research process.

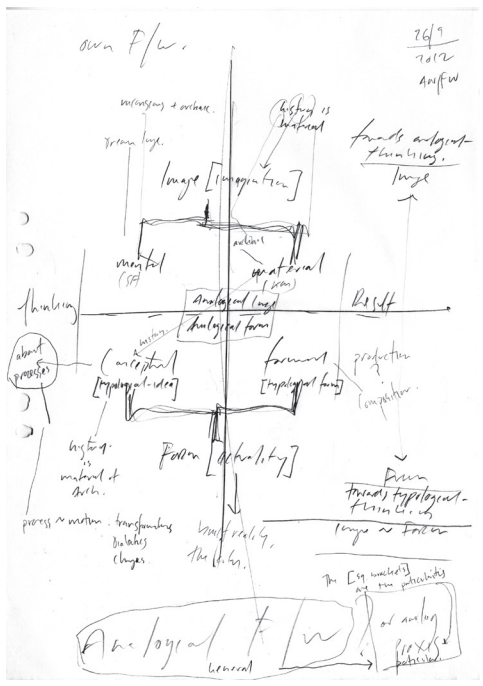
50. Ibid., p. 463.



Meta-theoretical Framework.

2.21.





2.22.

2.21. Meta-theoretical framework in which the thesis attempts to lock into. Here, architecture is viewed as the confrontation of built and unbuilt, material and immaterial representations. The ethos of a given culture is expressed through its architecture.
2.22. Sketch studies show the development of this thinking.

3.

HISTORY DISINTEGRATES INTO IMAGES, II

VISUAL DOCUMENTS

Montage Panels

Composition and Figurability

Visual Documents

In the last chapter, we put forward montage as the main research method for both visual and literary inquiry. In this chapter a selection of the visual work undertaken during the course of research is documented in order to provide a critical overview of the work done. It is a chapter of visual montages, with each page containing a number of images with a short written commentary. While each page has been composed as a panel at a larger scale, usually A1, the page is then reduced to fit the pages of this thesis. The commentary has been written after the panel was made and so is reflective in tone. Within each panel, the images themselves vary in scale. Sometimes they are sketch studies at A4, sometimes collage studies at A3, and sometimes paintings made at A2 or A1. The original studies are filed in a physical portfolio.

Montage Panels

The panels have a number of purposes. First, they bring together thematically linked work, to provide a visual summary of work done. Original drawings, images, and other studies that embody primary thinking are composed within a single panel. Second the panel provides a frame for another montage, which is the composing and recomposing of images already made onto a panel. This second purpose, provides a momentary period of critical reflection, which leads to a third purpose: the collating of work, the composing and recomposing of images, which always gives rise to new relationships, and therefore further insight. The process of documenting work, of combining and recombining, is itself an example of montage.

To indicate the development of research and in order to read the evolving thematic focus, the pages are organised chronologically. Let us say something of this chronology and thematic focus. Between September 2009 to May 2011, the PhD focused on issues of the city. Reading included works on the city in history, city development, and writing by contemporary architects on the city such as Koolhaas, Tschumi, and also urban thinkers such as Shane. During this period, research was undertaken through architectural design projects, so a number of project proposals were developed. These were informed by a reading of the *National Planning Framework for Scotland*, produced by the Scottish Government.[1] Research included analyses of texts, the selection of possible sites for theoretical urban design projects, and the development of an urban design for a city block.

Between June 2011 to November 2012 research focused on the work of Rossi. His buildings, drawings, and some of his references are studied. A study trip in which Rossi's projects as well as projects by those he referenced were visited. Analyses of *The Architecture of the City* and the *Analogical City* collage along with numerous studies of Rossi's drawings and references were made during this period.

Between November and December 2012, analyses of eighteen of Rossi's buildings were drawn. Analyses include built and unbuilt, and in each case the major formal components are de-montaged. The analysis, in general, uses images and drawings by Rossi. Each montage includes a mixture of orthographic, oblique and perspective drawings, which are then exploded into components in order to understand how architectural form is separated and integrated within an overall singular form. The purpose of the analysis was to understand the types of forms which have been used, using material which exists already. Each project also has a short written description, in which the focus is again on the formal aspects of the projects. The analysis proceeds from 1962, in a chronological order to 2001, which is the date of completion of one of Rossi's last projects. In the selection neither the first, nor the last project was Rossi's first or last. The selection includes unbuilt competition projects, such as the 1962 *Centro Direzionale* in Turin; built but temporary designs, such as the 1980 Teatro del Mondo for the Venice Biennale; and also built projects such as the Fagnano Olona School (1976). Although it is not necessary to have visited a building in order to analyse a building, it is worth mentioning that all the built projects selected, with the exception of the Borgoricco Town Hall, and the temporary Teatro del Mondo, have been visited. Some, but not all of these analyses are discussed in the chapters that follow, and are extended.

In January 2013, another urban design was put forward, which considered ideas about type.

Then, another series of collages were made between February and April 2013, during a period in which the research was being reframed. The images related to ideas about type, analogy, and autonomy which informed how these ideas were eventually framed in the chapters.

In the last page of this chapter, a number of diagrams made between September 2010 and June 2013 document the development of thinking on the keywords and relationships that constitute the framework in which the research was undertaken. Between September 2012 September 2013, there has been a drive to collate the body of visual and written work, and to "write it up." To collate, classify, and to visualise it, A1 montage panels were made using CAD and InDesign as a way to organise the material. The A1 panels organised chapters, visualised analyses of books, and worked through specific ideas such as Rossi's idea of type and his building designs. In this process of writing up, new categories and concepts have evolved so that although the view has certainly been to concluding matters, the "writing-up" has itself been productive because thinking is put into words.

Composition and Figurability

Each panel, as well as many of the montage studies within the panels, and indeed the thesis pages themselves follow a similar compositional principle. First, an axis divides the page in half on the long side. Second, a series of cross-axes divide the page a number of times on the short side. The purpose of this compositional principle is to structure each of the montages, in which images form vertical, horizontal, and oblique relations. The images themselves, as material things, bring with them a complex set of unseen relations. When the images are juxtaposed or superimposed, they form a dialogue. In this case, it is the new relations that become interesting, that become productive.

It is possible to read the bi-lateral symmetry of the panels as analogous to the human figure. Each page is thus a conceptual portrait of a particular idea. It is interesting to have in mind here that Freud, in his self-analysis of forgetting the name Signorelli as the painter of the *Last Judgement* frescoes at Orvieto Cathedral, put forward a diagram to show the connections in his process of forgetting, remembering, and mis-remembering.[2] Freud's diagram, in formal appearance, can be read as a duplication of the frescoes that he had gazed toward at Orvieto. We should also remember that the human figure, and anthropomorphic forms in general, pervade Rossi's drawings and can be read in his buildings, as he points out himself. To take a single example, Rossi wrote the following about his project at Modena, after a car accident and lying in the hospital:

Fig. 3.1.
Fig. 3.3.
Fig. 3.4.
Fig. 3.2.
Fig. 3.5.

> I merely gazed at the trees and the sky. This presence of things and of my separation from things - bound up also with the painful awareness of my own bones - brought me back to my childhood. During the following summer, in my study for the project, perhaps only this image and the pain in my bones remained with me: I saw the skeletal structure of the body as a series of fractures to be reassembled.[3]

Furthermore, it is not unusual to find shadowy figures, the hand of San Carlone, and anatomic drawings of horses, as well as other animals, in Rossi's montages.[4] The analytical gaze, having traversed the work of Rossi, inflects a representation of the criticism undertaken, the time taken to understand Rossi and his work, becomes the figural form of each montage. Although, it would be interesting to continue with this analysis of latent and manifest content, of surface appearance and productive relations, we must instead move on. We will therefore point out two commentators from which this inquiry could be extended. First, Foucault's discussion on Manet's paintings, where the material properties of the painting itself are analysed in relation to the gaze of the viewer.[5] Second, Louis Marin's discussion on the frame of painting and the figure, in the book of his collected essays *On Representation*.[6] Both begin with formal analyses before turning to

1. The Scottish Government, *National Planning Framework for Scotland 2* (Edinburgh: The Scottish Government, 2009) <http://www.scotland.gov.uk/Publications/2009/07/02105627/10> [accessed 21 August 2013]. It sets out, at a national level a strategy for the country's spatial development. Strategic Development Plans (SDP) and Local Development Plans (LDP) were consulted on the basis for selecting a site and developing a brief and programme. The former are prepared for Scotland's four largest city-regions, around: Aberdeen, Dundee, Edinburgh and Glasgow. SDPs set out a long term (20 years) planning strategy for the wider city-region and indicate where future development will be located. They set the context for LDPs which in turn set out in more detail, policies and proposals specific to the local authority area and are prepared by the relevant council, in line with the overall SDP. The LDPs guide landuse on a site by site basis. With this in mind, it was the view to use locations and uses defined in the plans as a guide to sites and brief development.

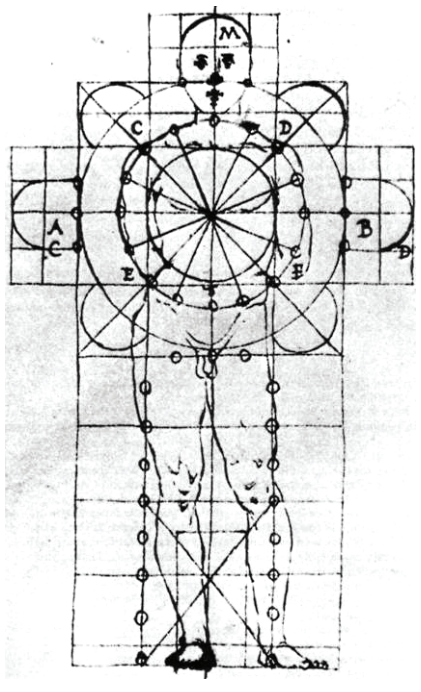
2. Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud: The Psychopathology of Everyday Life* (1901), trans. by Anna Freud and James Strachey (London: Hogarth, 1960), Vol. 6, pp. 3-13.

3. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), p. 11.

4. See the short section by Morris Adjmi, Giovanni Bertolotto and Stefanie Lew, 'Anatomy of the Horse', in *Aldo Rossi: Drawings and Paintings* (New York: Princeton Architectural Press, 1993), pp. 73–84. Also refer George Stubbs, *The Anatomy of the Horse* (London: Pallas Athene, 2005). Dates from 1766.

5. Michel Foucault, *Manet and the Object of Painting*, trans. by Matthew Barr (London: Tate Pub., 2011).

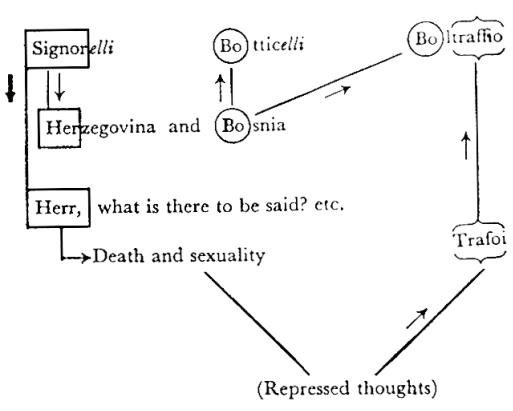
6. Louis Marin, *On Representation* (Stanford, Calif.: Stanford University Press, 2001). First



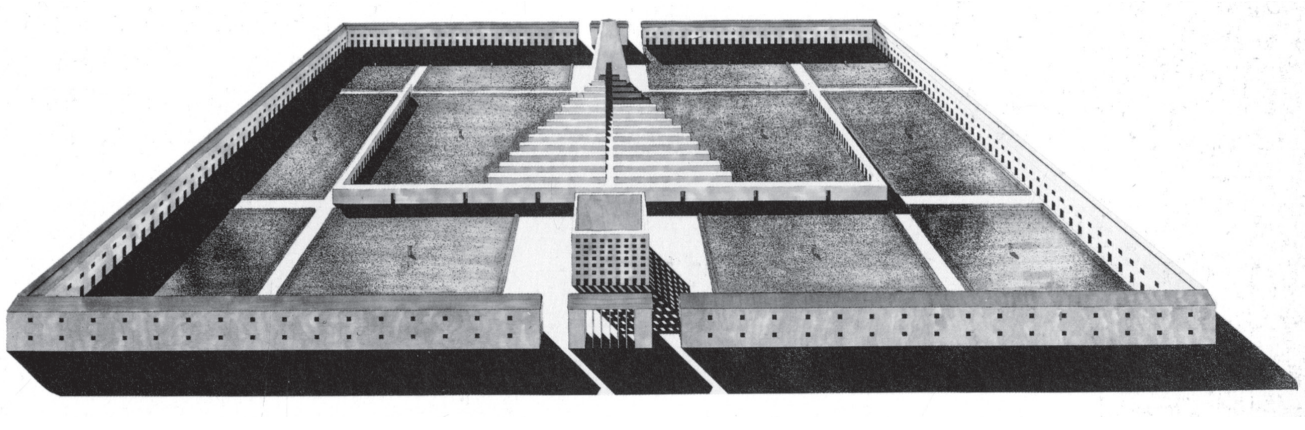
3.1.

3.2.

3.3.



3.4.



3.5.

3.6.

3.1. Drawing by Francesco di Giorgio, 1482. Humanising the architectural body of form.
3.2. Rossi, Interior, 1975. A shadowy figure views out of a window, beyond a table with domestic objects.
3.3. Luca Signorelli, The Resurrection, 1499-1504. One of the frescoes of The Four Last Things. Angels in the air wake the dead.
3.4. Freud, Diagram for forgetting the name Signorelli and its substitution of Botticelli, and Boltraffio, 1901. The diagram itself recalls a frescoe. Words form the heavenly angels and repressed thoughts represent Death and Hell.
3.5. Rossi, Aerial view of Modena Cemetery, 1971-84. The hollow cube takes the form of a face, the porticoe and columbaria are the rib cage with shoulders and arms, while the conical grave forms a phallus.
3.6. The skewed perspective of Rossi's drawing, reminds us of Mantegna's Lamentation over the Dead Christ, c1480 that hangs in Milano Pinacoteca. A scene depicting the tragedy of Jesus' death and the melancholic sorrow of Mary and others.

some of the unseen relations of viewer and how images are received within a wider sphere of power.

Lastly, the images included in this chapter are not referred to in the remainder of the thesis. The images are viewed as *thought-things*, as Arendt would say, *dialectical-images*, as Benjamin would say.[7] They are produced to evolve a visual-cognitive library for possible future recall. The production of images, which is the notion of fully materialised affect, thought, and idea, where history is collapsed into a single and momentary present, is of crucial value to the inquiry. The images are thus distinct and equivalent, simultaneously embedded within the content that follows, yet autonomous and separate. It is possible to read these images as a single montage, in opposition to the de-montage of the thesis that surrounds them.[8]

published in 1994. On the concept of the figure, see pages 54-63, and 352-372.

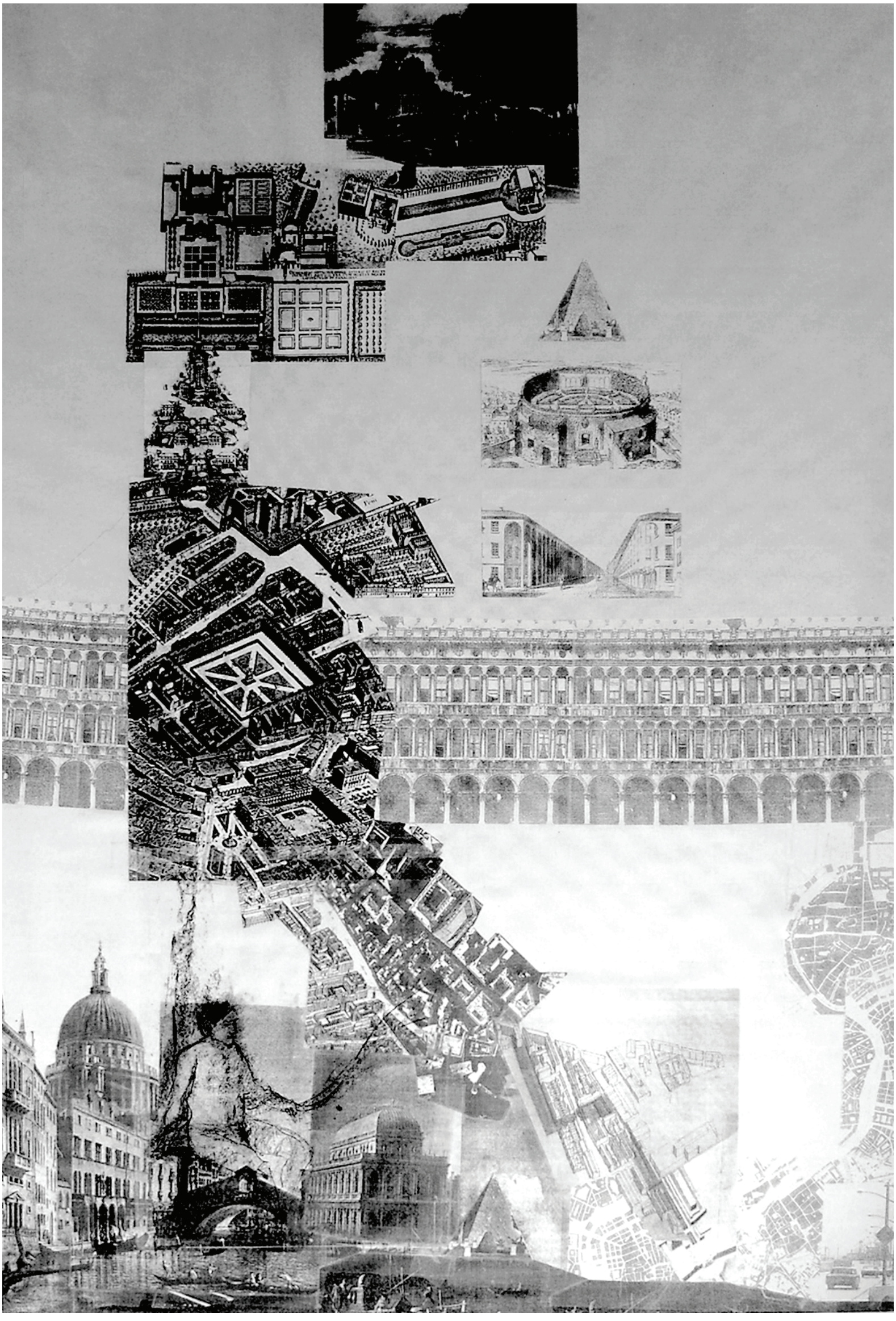
7. Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1989), pp. 167-174. Walter Benjamin, *The Arcades Project*, trans. by Kevin McLaughlin and Howard Eiland (Cambridge, Mass.: Harvard University Press, 1999), p. 463 for one example. See also Walter Benjamin, 'Theses on the Philosophy of History', in *Illuminations*, trans. by Harry Zohn (London: Fontana Press, 1992), pp. 245–255. Benjamin's "Theses" were written in 1940, only months before his suicide, and first published in 1950. *Illuminations* has an interesting introduction by Arendt.

8. Statement by Tafuri on the following page from Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-gardes and Architecture from Piranesi to the 1970s* (Cambridge, Mass.: MIT Press, 1990), p. 15. First published in Italy, 1980.

Visual Documents

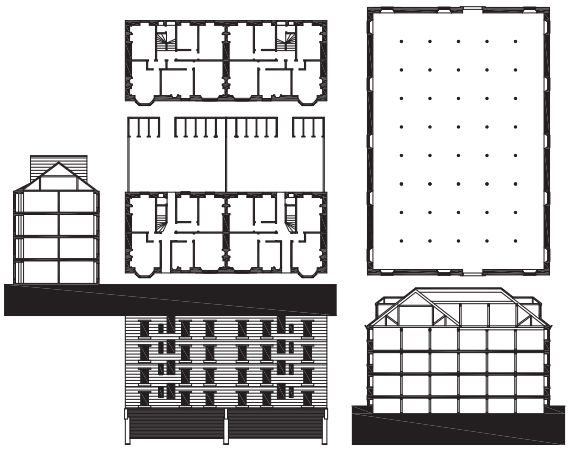
The critical act will consist of a recomposition of the fragments once they are historicised: in their "remontage."

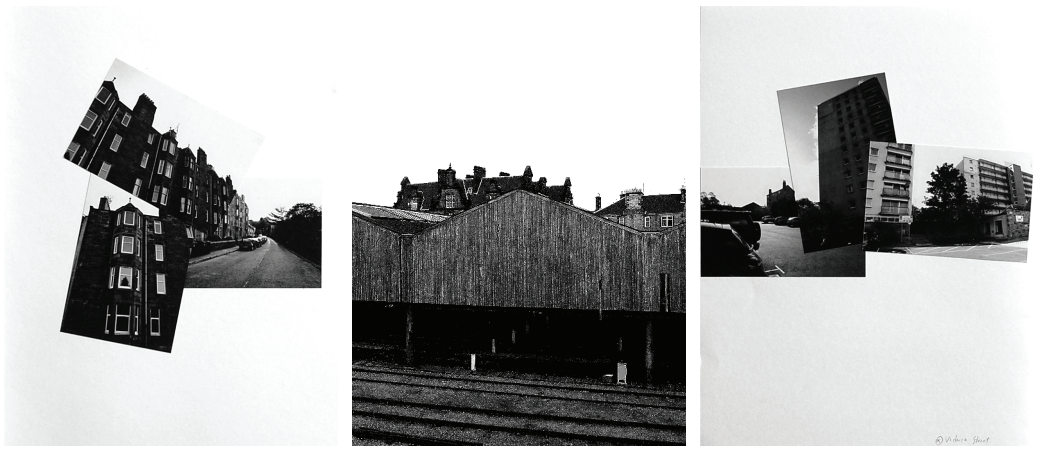
Manfredo Tafuri, *The Sphere and the Labyrinth*, 1980.[8]



A Commentary on the Excursus Chapter of Collage City, September 2009.
Study of Rowe and Koetter's Excursus chapter from Collage City, the abridged list of "a-temporal and transcultural" objets trouvé. Photocopied from the book, the illustrations are combined within my own collage so that a visual critique of Collage City is developed. The study tested initial thinking on the compositional strategy of Rossi's analogical city concept interpreted here as the visual technique of collage. Paintings by Canaletto and Marlow form the base of the drawing. Cor van Eesteren's project for Unter den Linden, a "memorable street," collides with the Place des Vosges in Paris. Public terraces lead to a landscape by Poussin. The "potentially interminable set piece" of Procuratie Vecchie in Venice is extended beyond the paper edge, at the centre of the collage. All images are photocopied from Collage City, with a pencil sketch of a sitting figure by the author.

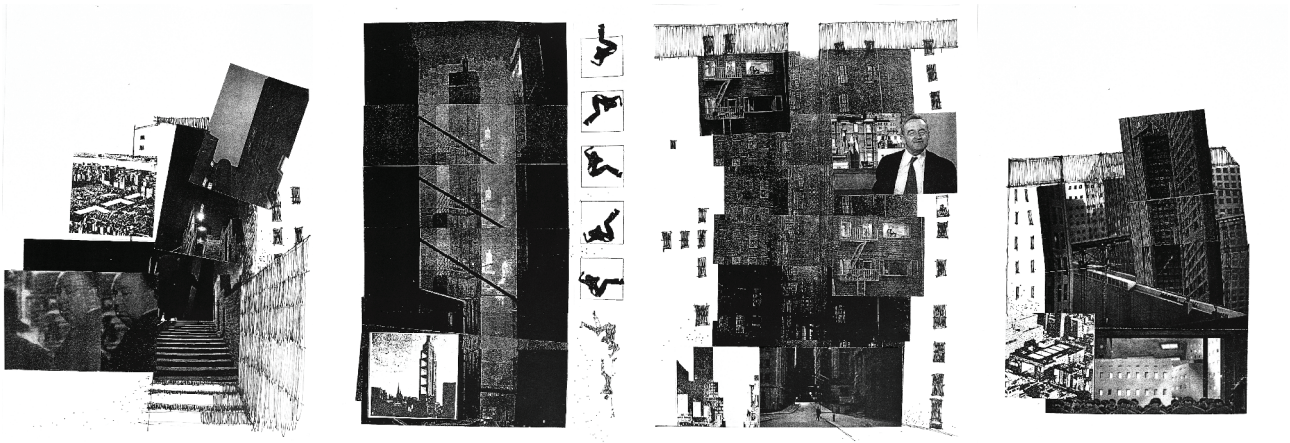
LITERATURE STUDY; ANALYTICAL DE-MONTAGE; OPERATIVE-MONTAGE

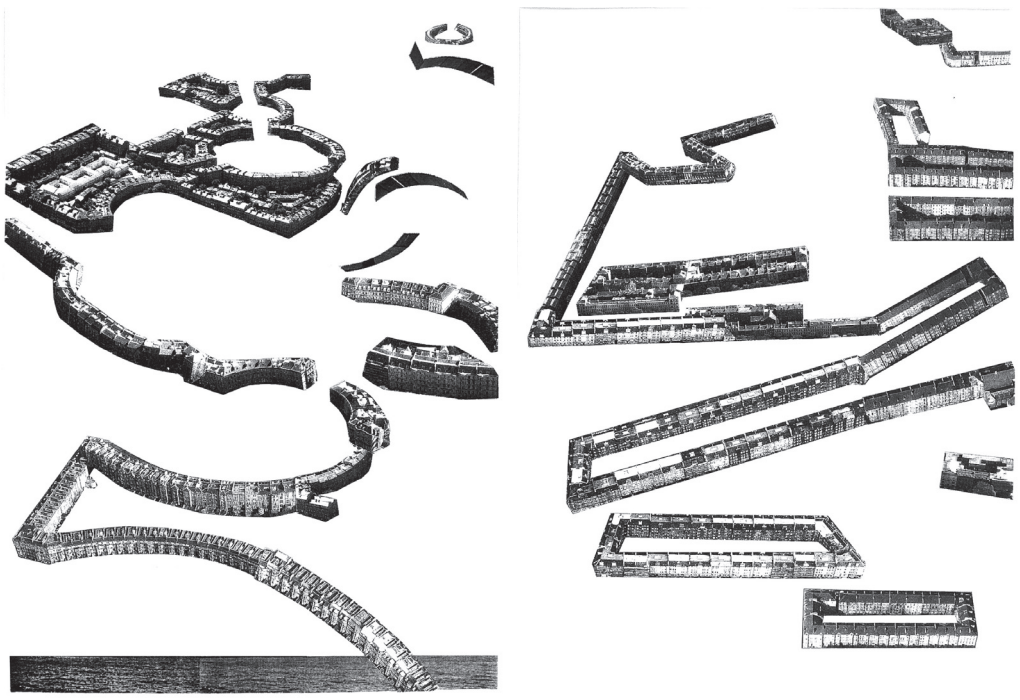




Hybrid Form, September 2009.
Study of a tenement and warehouse in Perth, Scotland, investigating how to combine form and programme. The paintings combined plans of the warehouse and elevations of tenements. The project became a visual study of Perth using photomontages and sketch studies. It did not make the leap to the design of formal hybridity. All drawings and photographs made by the author, with the exception of the city plan, the base of which was an OS Map, filled in by the author.

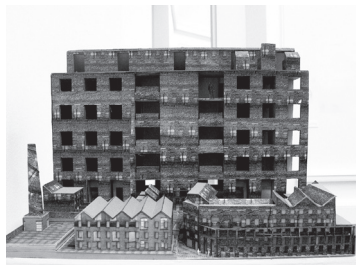
CITY STUDY; OPERATIVE MONTAGE

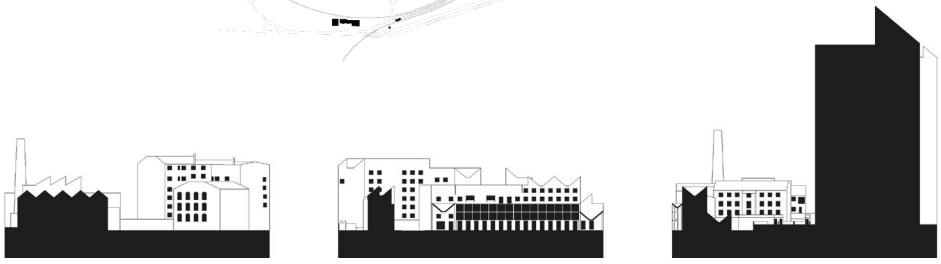




Imaginary Cities and Haunted Houses, April 2010.
A paper written for the conference "Haunted Houses and Imaginary Cities" studied the urban types from Bernard Tschumi's Manhattan Transcripts as categories to examine Glasgow and Edinburgh. The urban types included: the park, tower, block, and street. Each urban type corresponded to a photomontage which composed aerial photographs and my own photographs of Glasgow and Edinburgh. It illustrates the city as an assemblage of fragments, developing the fragment as an aesthetic and analytical category. Top photomontages by the author using own drawings and photocopies from Tschumi's Transcripts, along with film stills. Two Google Map views of Edinburgh (left) and Glasgow (right), with cut outs of each city below by the author.

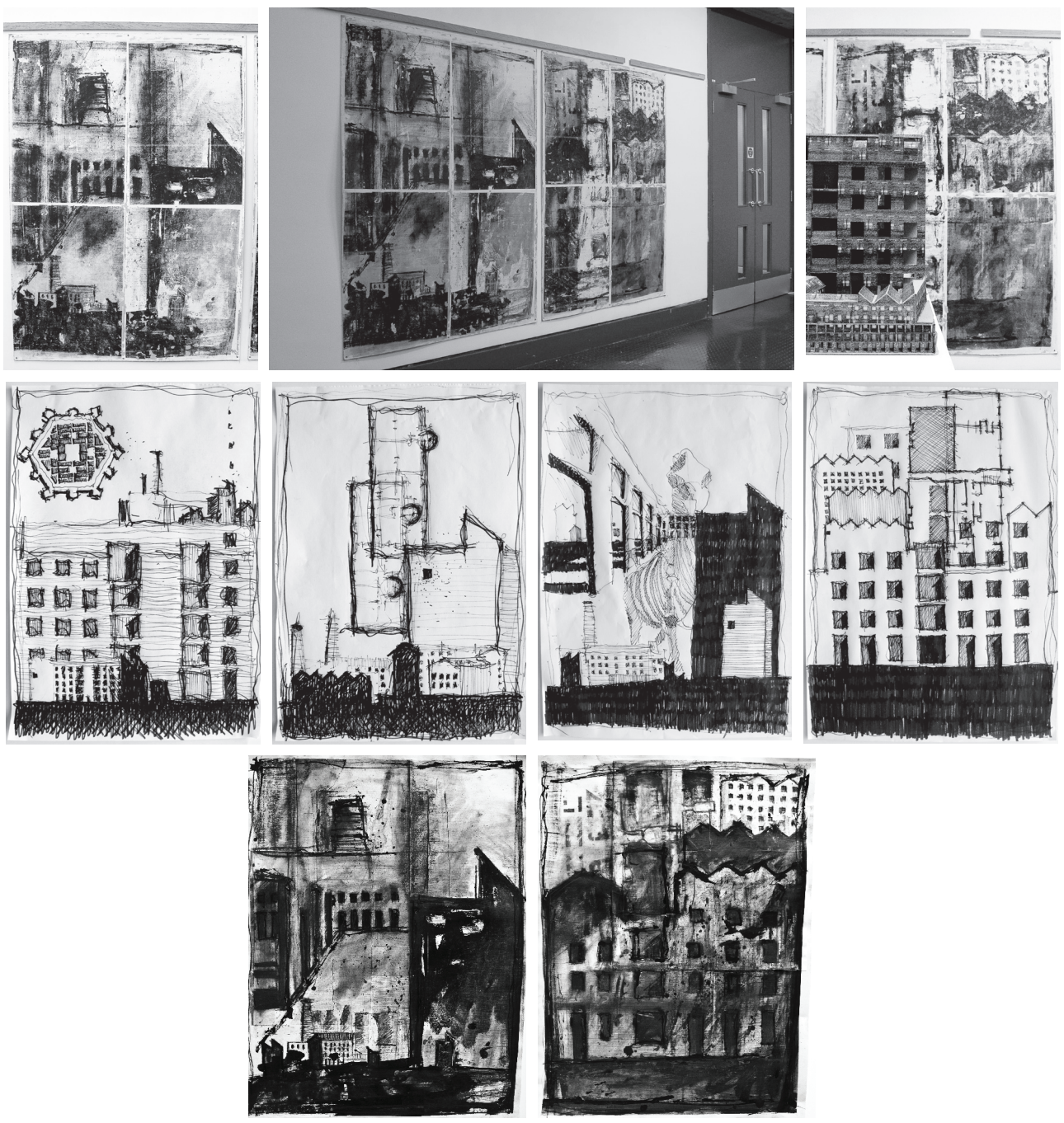
LITERATURE STUDY; ANALYTICAL DE-MONTAGE; OPERATIVE-MONTAGE; TYPOLOGICAL CRITICISM





Analogical Production, April 2010.
An exhibition of work from The Architecture of Analogy Masters project at the RSA in Edinburgh gave rise to reflect on the original project. This new project developed thinking on serial production (authorship) as an analogical strategy. Analyses were re-drawn and a new scale model was built. The original project used the typological form of industrial building to create cohesion in a fragmented part of the city. For the exhibition, a scale model re-constructed a fragment of the original project and investigated analogical strategies such as the distortion of form, and scale, along with the transposition of forms from one location to another. All drawings, models, and photographs by the author with the exception of the aerial view to the upper left which is an archive photograph and the base city plan which is from an OS Map and filled in by the author.

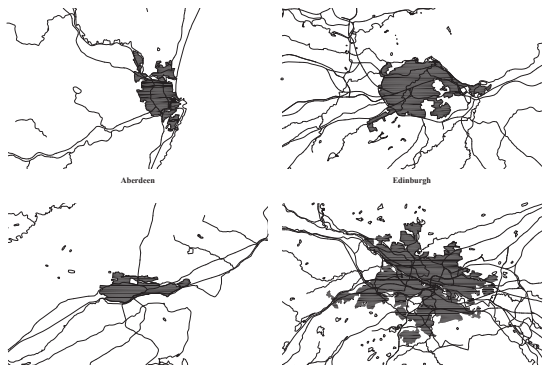
ANALOGICAL PRODUCTION; URBAN DESIGN



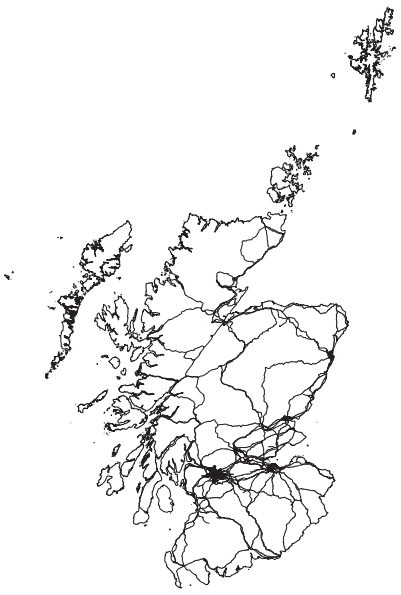
Dissolution of Scale, September 2010.
The drawings and montages investigate "scale" as a design strategy within an analogical framework to extrapolate sub-themes such as seriality, proportion, extrusion, fragmentation and displacement. Gel medium transfer was used to scale up original drawings by four times, and pieced together on hardboard. All sketch studies, and paintings by the author.

ANALOGICAL PRODUCTION

Location of Cities



Cities included in Scotland's Strategic Development Plans

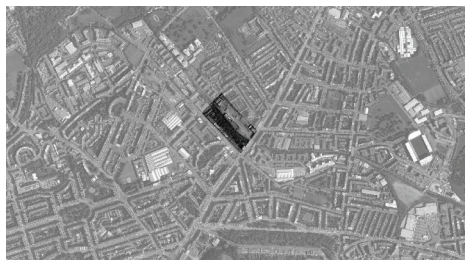


Scotland's Six Cities with Transport Links

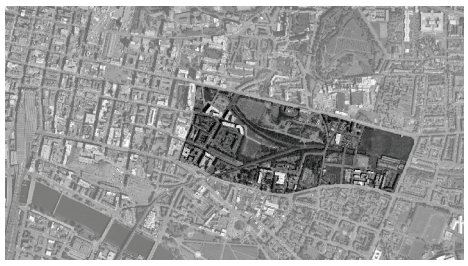
Inverness

Aberdeen

Dundee



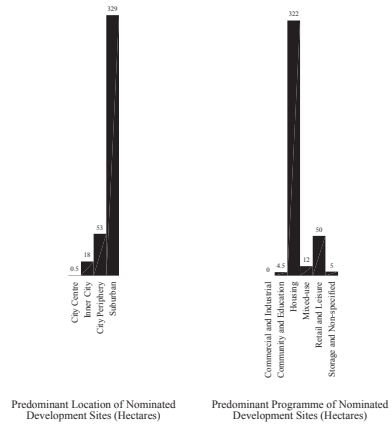
Edinburgh



Glasgow

City Selection, April 2011.

The primary research method during this period was considered to be architectural design proposals, so the selection of a site within a particular city was debated. Scotland's six cities were considered: Aberdeen, Dundee, Edinburgh, Glasgow, Inverness, and Stirling. Then, four cities within Scotland's Strategic Development Plans (SDP) were studied: Aberdeen, Dundee, Edinburgh, and Glasgow. Locations from these were selected as possible sites. However, matters were complicated by the current changes to planning policy in Scotland. For instance, Aberdeen was yet to publish a draft SDP at the time of this research. Drawings at the top used OS Maps as there base, filled in and redrawn by the author. The images below, are from Google Maps and montaged by the author.



Relationship of Predominant Location and Programme

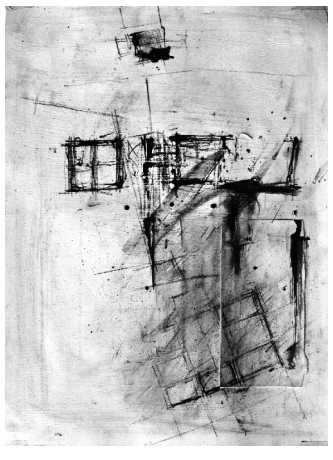
Classification of Nominated Development Sites by Location and Programme

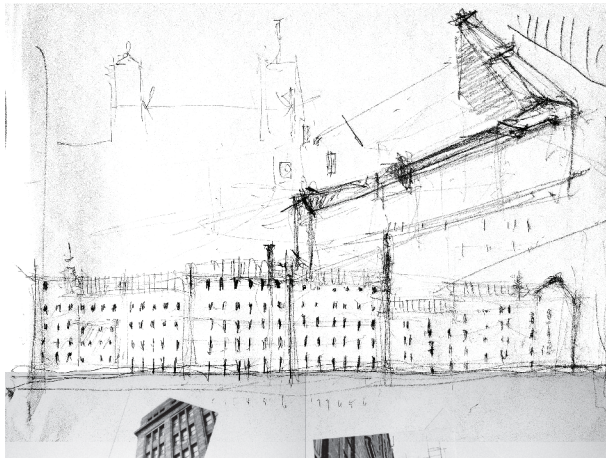
Key Plan Indicating Location of Nominated Development Sites (toned black); Dundee City Council boundary shown dashed. Scale 1/50 000 North

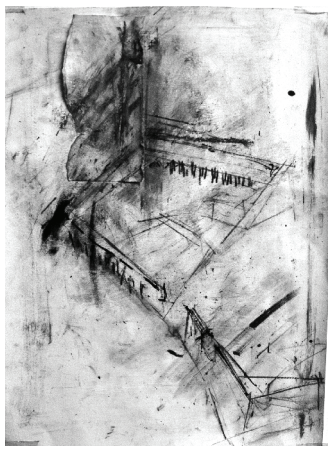
Analysis of Main Issues Report of Dundee Development Plan, April 2011.

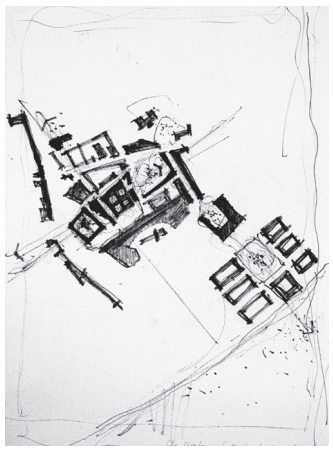
Connected to the city selection process, a study of Development Plans was undertaken to locate a site and general brief for research through architectural design propositions. The scope of study was limited to the Dundee Development Plan. It was judged that this would build on work done from The Architecture of Analogy Masters project, and as a host city to the V&A there is current significance for Dundee. At the time, the most current development plan was the draft Main Issues Report, so this was analysed. When we look at the MIR analysis, we can see the expansion of Dundee beyond the Kingsway ring-road and into the surrounding countryside, indicated by the proposed development sites. All drawings by the author.

CITY STUDY; ANALYTICAL DE-MONTAGE



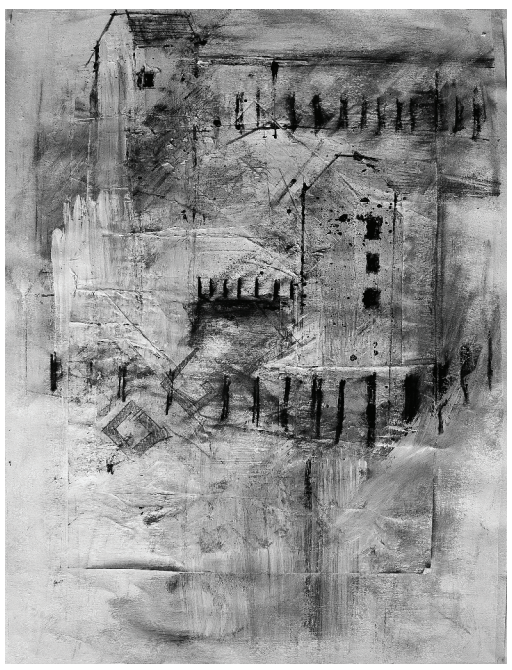




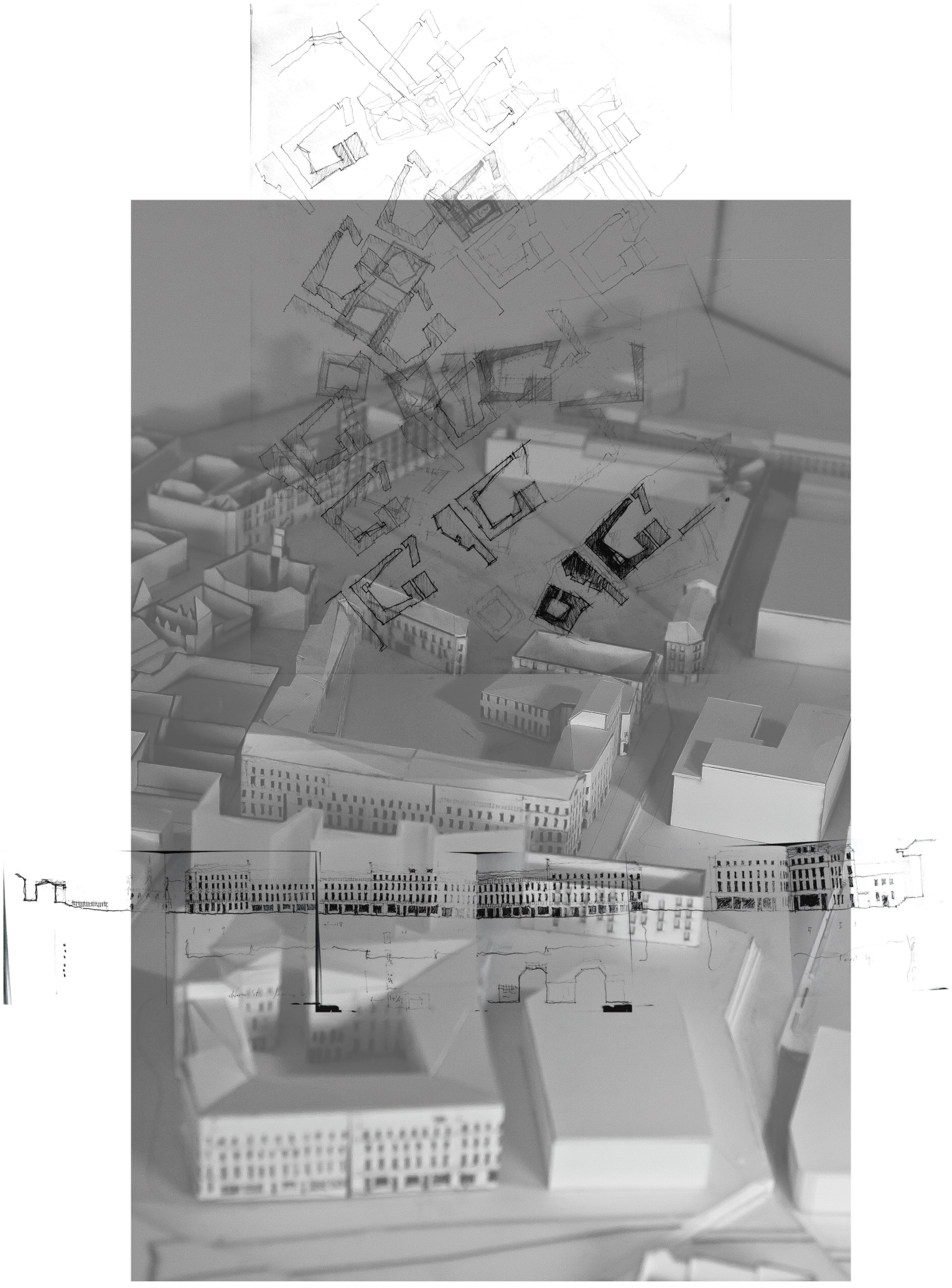


An Urban Block in Dundee City Centre, May 2011.
After the analysis of the MIR, a project for a site in Dundee city centre was undertaken. The project takes a courtyard urban block as its typological form, and combines it with a tower. However, the design remained diagrammatic and did not get to the scale of urban design. For instance, the relationship of front and back, public and private, or any clear formal vocabulary remained unresolved. An alternative design proposal, and perhaps more productive, would have been to site a scaled up version of this urban block on the city edge in accordance with the MIR analysis which pointed to increased edge of city housing development. The project could have countered the low density suburban housing that currently proliferates. All drawings and photomontages are authors own, with the exception of the city plan, which is an OS Map, but filled in by the author.

CITY STUDY; OPERATIVE MONTAGE



An Urban Block in Dundee City Centre, May 2011.
Studies of urban types to be used in the urban block project. Top: tower; left: street; right: block. The images themselves are mixed media studies using photographs by the author and painted over with guache, ink, chalk and charcoal.



An Urban Block in Dundee City Centre, May 2011.
Photograph of scale model with elevation studies of the urban block project. All authors own.

After Aldo Rossi Study Trip, June 2011.
Photograph and sketch studies of Milan, with Rossi's housing block Gallaratese top left, and Segrate piazza top right. Photomontages are usually made in sets of three, and pieced together on A4 cartridge paper. Each photograph starts with one upright and follows the general form of the photographed object.

All images authors own.

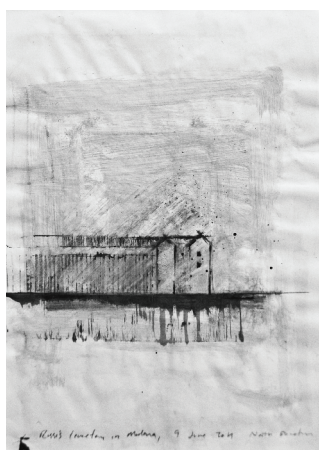
CITY STUDY

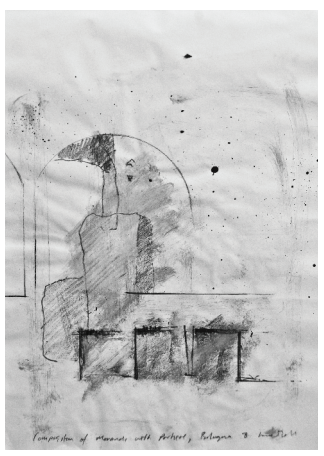
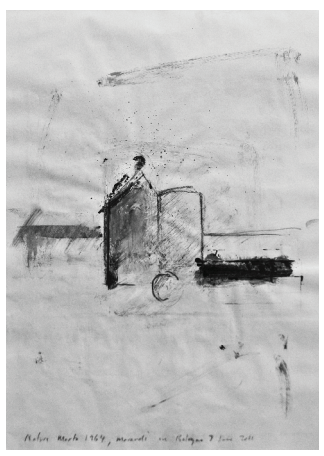
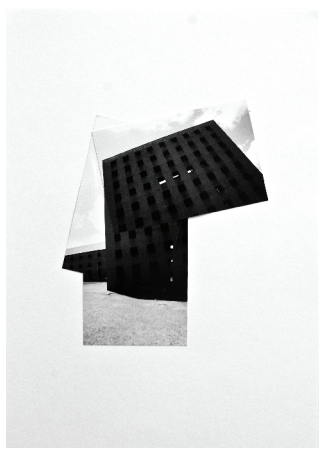
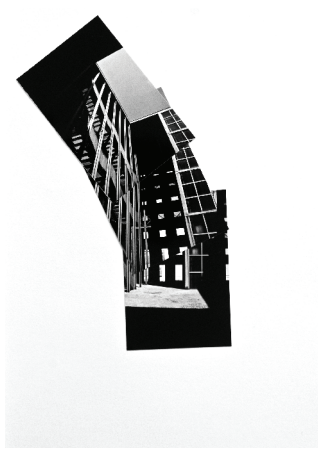
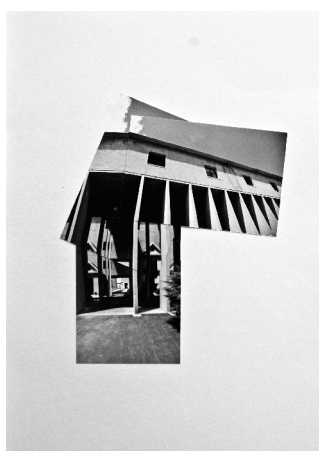
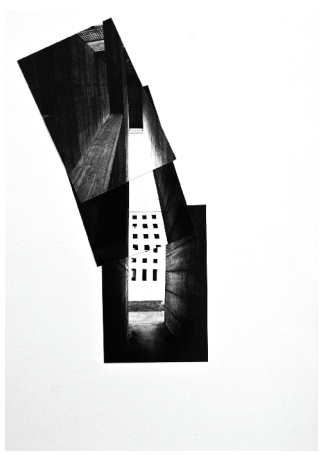
School at Fagnano Olona

School at Broni

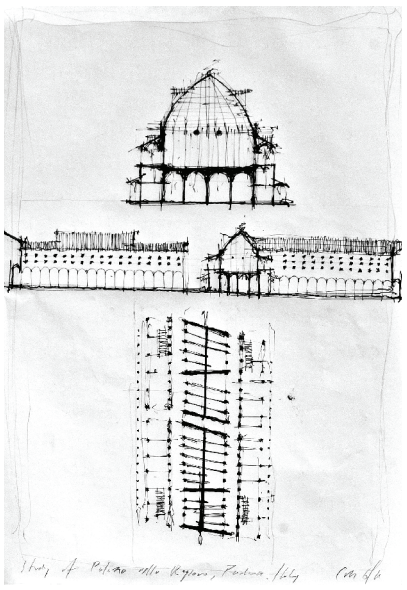
After Aldo Rossi Study Trip, June 2011.
Photograph and sketch studies of Rossi's schools at Fagnano Olona on left, and Broni on right. Both projects are based on the courtyard type. At Fagnano, the courtyard is connected to a stair. At Broni, the courtyard is subdivided into quadrants. All images authors own.





After Aldo Rossi Study Trip, June 2011.
Photograph and sketch studies of Rossi's San Cataldo Cemetery outside Modena, with studies after Morandi from Bologna. Top left views the hollow cube of the project viewed through the top floor of the perimeter building containing the columbaria. Top right views along the colonnade of the "hinge" building. All images authors own.



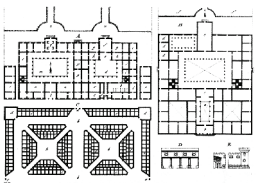
Palazzo della Ragione, Padua

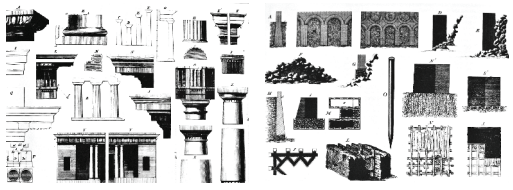
San Carlone, Arona

After Aldo Rossi Study Trip, June 2011.
Photograph and sketch studies of Rossi's references: the Palazzo della Ragione in Padua on the left, and the statue of San Carlone in Arona on the right. Rossi often cited the former in The Architecture of the City as an example of the complexity of urban artefacts. The latter appears often in Rossi's sketch studies, either as the full figure, or only the hand. It was my intention to follow Rossi's work, and also his references as a "way-in" to understanding his influences, which is also to say the general physical environment in which Rossi worked. All images authors own.

After Aldo Rossi Study Trip, June 2011.
Photograph and notebook studies of Venice and Vicenza, including Palladio's Il Redentore, San Giorgio Maggiore, Palazzo Chierecati, and Vicenza Basilica. Also studies of the Rialto Bridge which was the site of many Canaletto vedute paintings. One of which Rossi held as an example of the analogical city, in which Palladio's buildings are brought together from their separate locations. All images authors own.

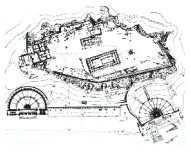
CITY STUDY

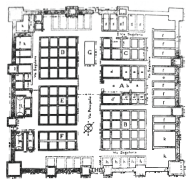




Typological Questions

Greek City





Roman Settlement

City / Architecture

Collective Parts ← — — — — — — — — → Individual Points

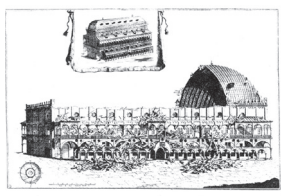
Preliminary Dialectic

Dwelling Area (Urban Formation)

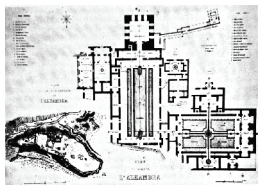
Primary Element (Single Point)

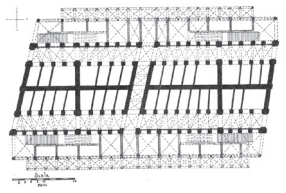
Individual Houses

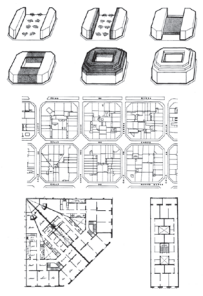
Dwelling Area ← Theory of Permanences → Monuments



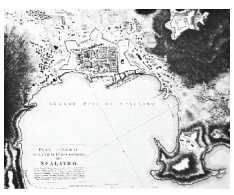
Street Plan

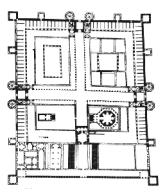






Propelling Permanence / Pathological Permanence

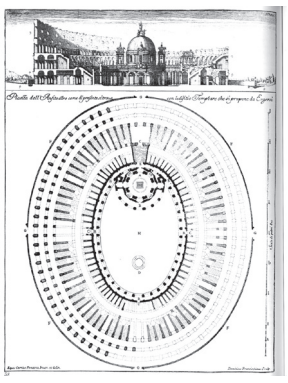




Collective

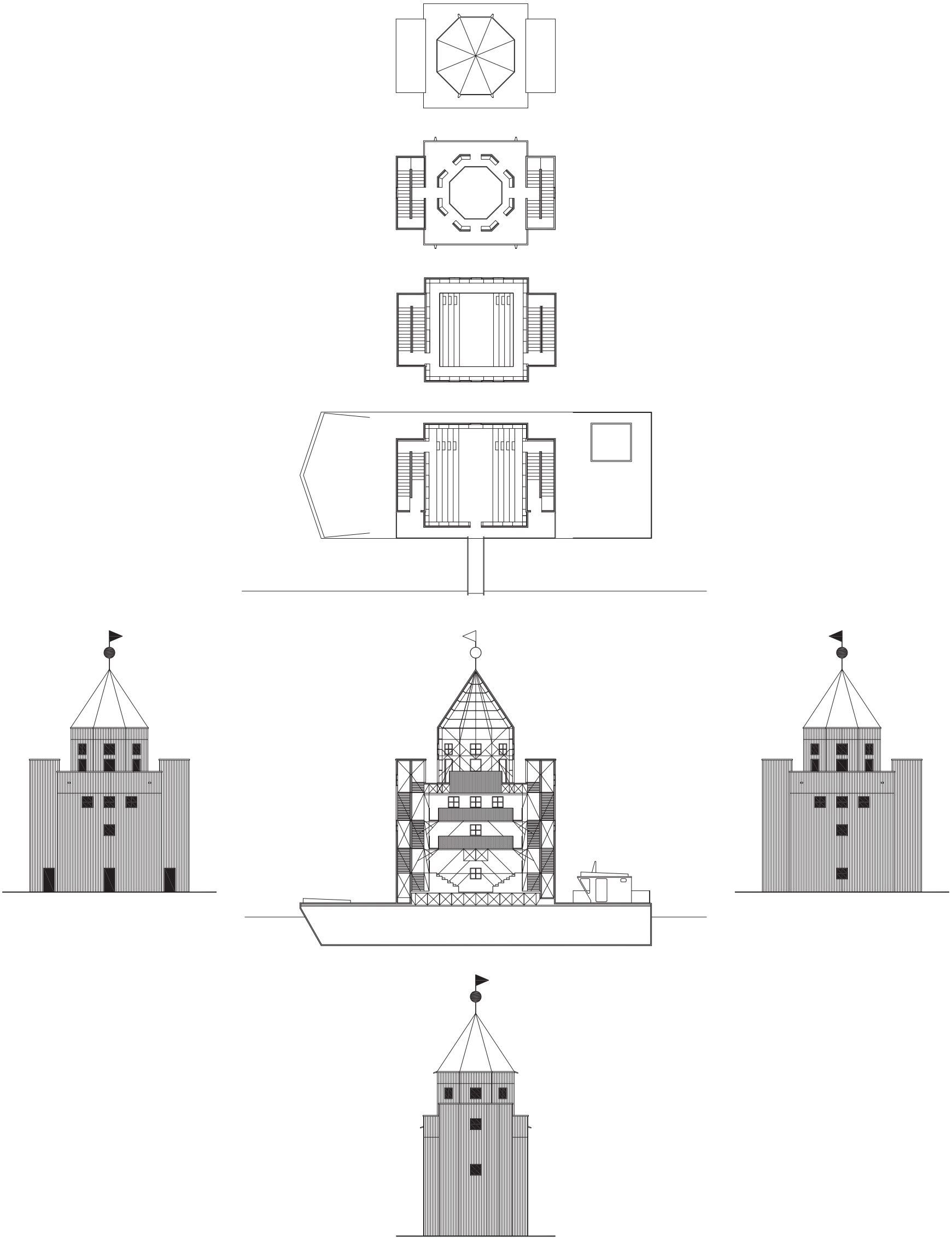
Individual

Collective Memory / Locus

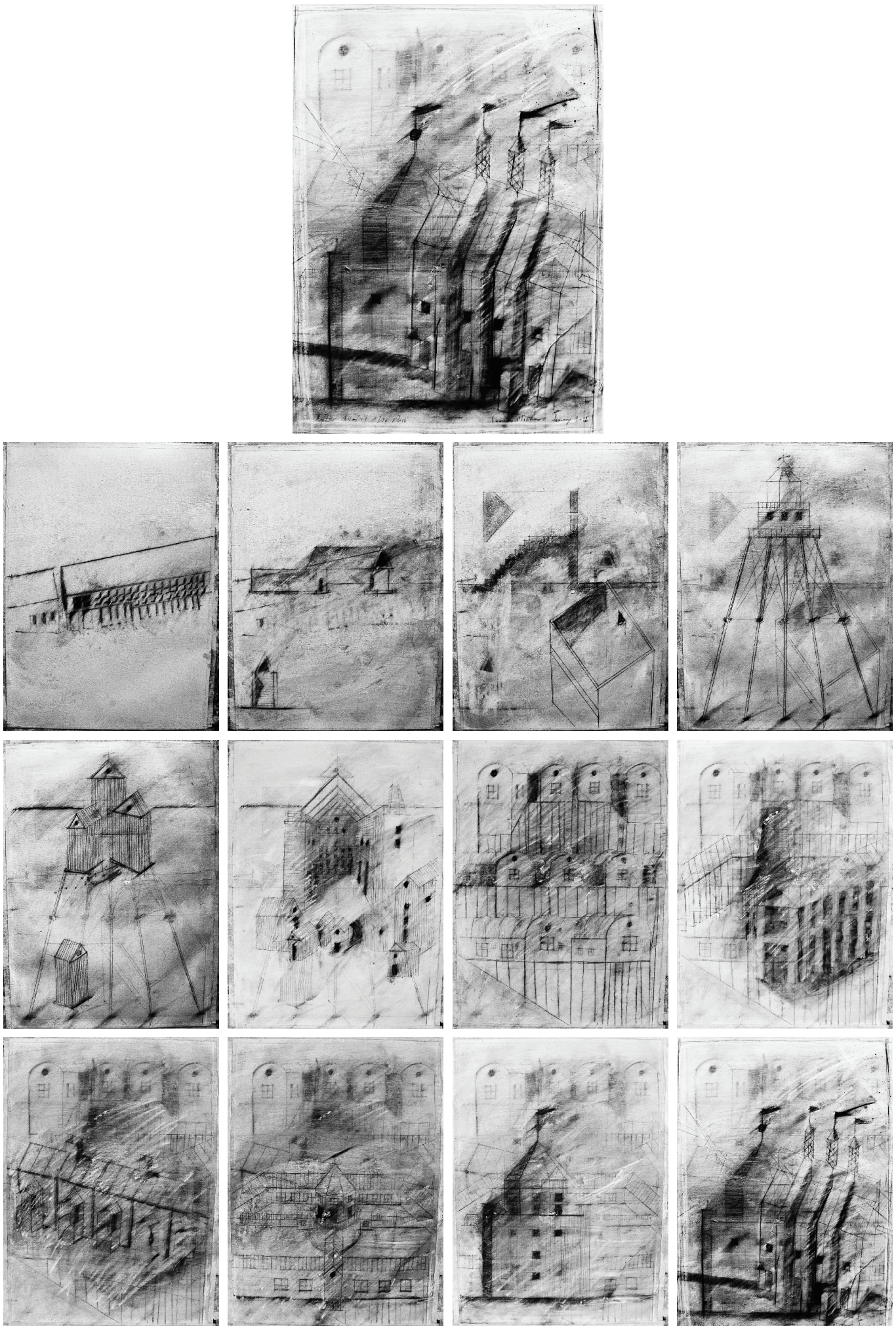


Analysis of The Architecture of the City, November 2011. *Using only images from the American 1982 publication of The Architecture of the City, the diagram shows keywords and relationships in the book. Montage by author. Various diagrams have analysed this book. Two more are toward the end of this chapter, and the keywords are analysed in the section on Rossi's book in the following chapter.*

LITERATURE STUDY; ANALYTICAL DE-MONTAGE



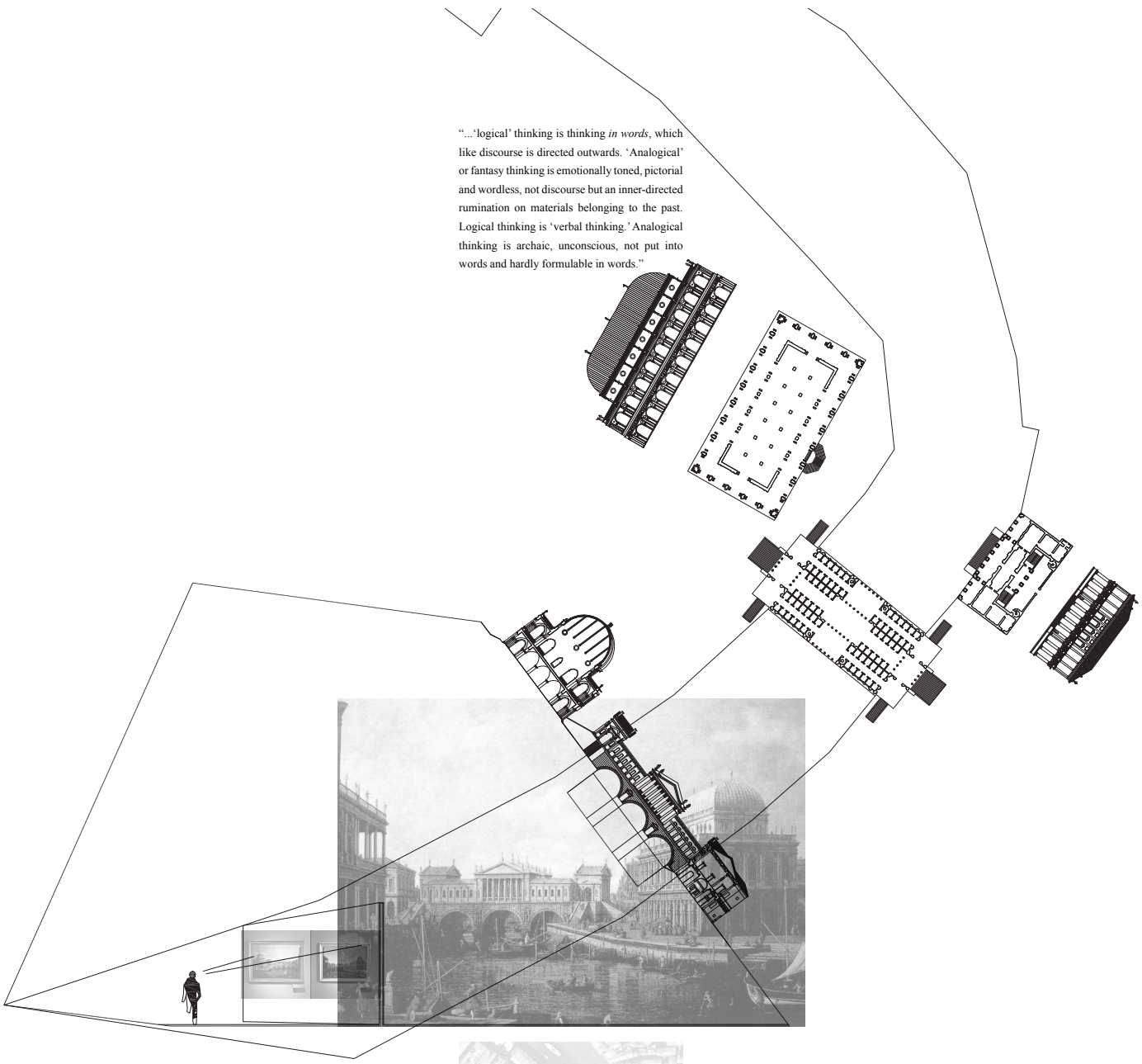
Study of Teatro del Mondo, November 2011.
Drawing of Rossi's temporary floating pavilion for the 1980 Venice Biennale. Drawing by author.



Study of Drawings in A Scientific Autobiography, January 2012.
In A Scientific Autobiography, Rossi appends a series of sketch studies of a selection of his projects to that date in 1981. My own study above, is a drawing of Rossi's drawings. They are superimposed one after the other. Each project is drawn in pencil and ink, then painted over with chalk and paint. Then, the next of Rossi's drawings is redrawn. The top image is the final drawing. The images below are built up from the upper left to the bottom right. It is a painted palimpsest. All images authors own.

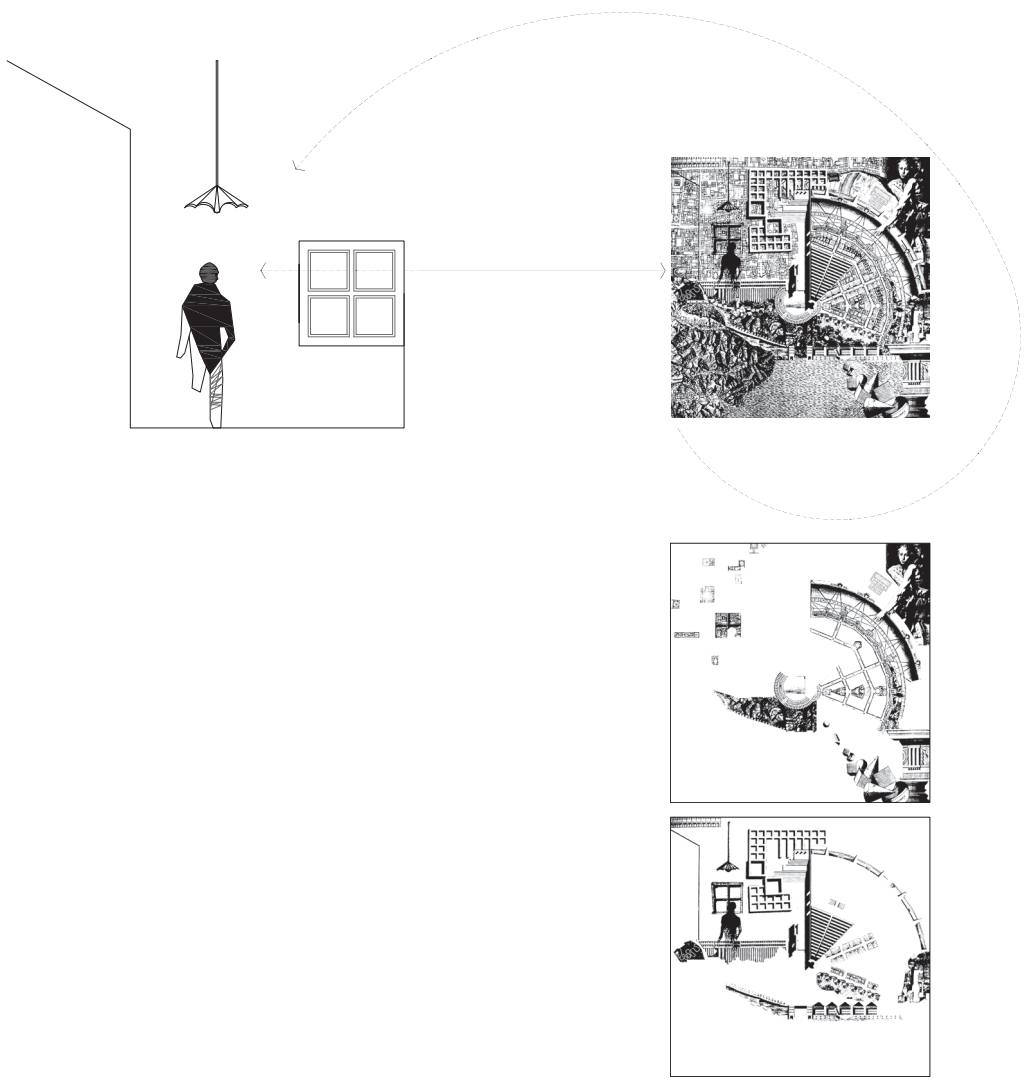
IMAGE STUDY; ANALYTICAL DE-MONTAGE; CRITICAL MIMESIS

"...'logical' thinking is thinking *in words*, which like discourse is directed outwards. 'Analogical' or fantasy thinking is emotionally toned, pictorial and wordless, not discourse but an inner-directed rumination on materials belonging to the past. Logical thinking is 'verbal thinking.' Analogical thinking is archaic, unconscious, not put into words and hardly formulable in words."



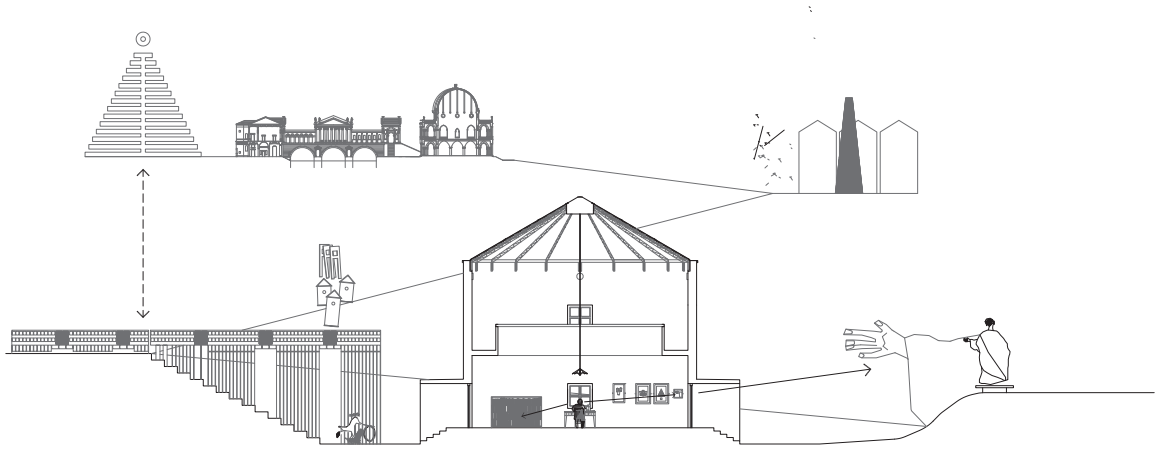
Study of Canaletto Vedute, February 2012.
Rossi viewed the Canaletto vedute painting in 1964 as it hangs at the Parma Museum of Art, adjacent to another painting by Canaletto. In my own montage, Rossi is depicted as the shadowy figure viewing the paintings, which were both photographed by me on my visit to the museum. The central image is the painting by Canaletto that Rossi cites. Below are Google Map images of the three separate locations from which Canaletto montaged Palladio's buildings into his painting. The line drawings to the top right are a plan and elevations of the composition by Canaletto, with a section superimposed onto the painting. This montage was one of a series that can be read as "narrative-based." For a period of this research, allegory was connected with the notion of analogy, but has since been placed as a secondary role within the analogical city concept.

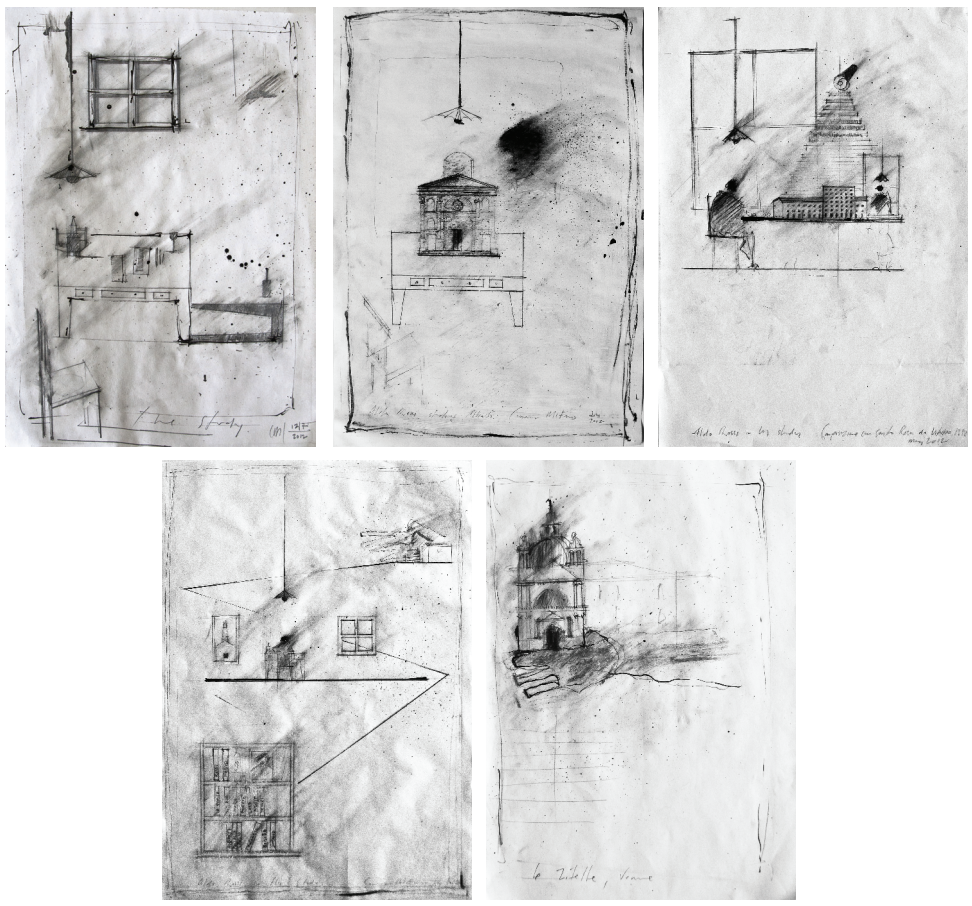
ALLEGORICAL-MONTAGE; ANALYTICAL DE-MONTAGE

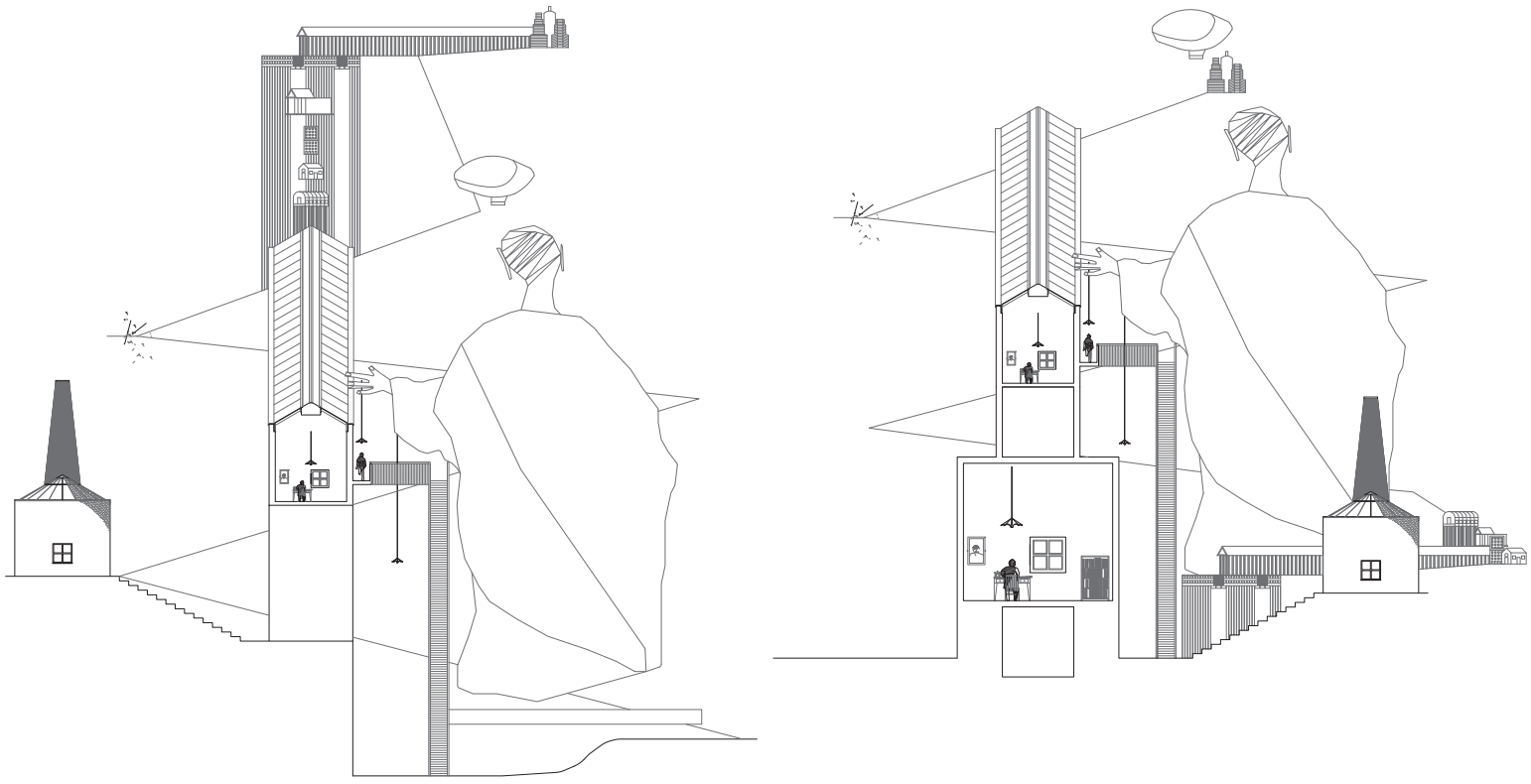


Study of Analogical City Panel, February 2012.
Sketch studies with notebook extracts and montage studies of Rossi's Analogical City collage. At the top, Rossi is depicted as a shadowy figure, de-montaged from the collage panel on the right. The squares below de-montage the projects not by Rossi, then only the projects by Rossi. This panel is subject to a full analysis in the chapter on the Analogical City. Collage panel from Rossi, other images authors own.

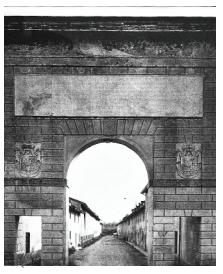
ANALYTICAL DE-MONTAGE; IMAGE STUDY

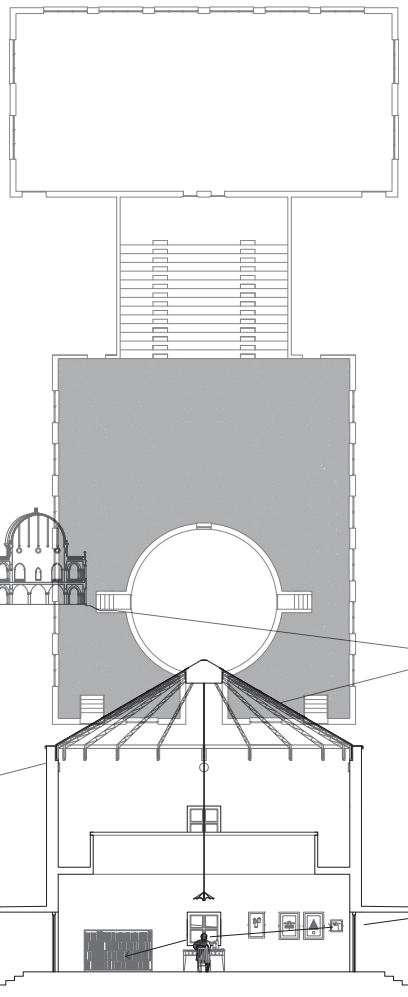






Aldo Rossi in His Study, January - June 2012.
A selection of studies of Rossi with his references, and projects. Another narrative-based analysis, which was later followed by an alternative analysis of a suite of drawings by Rossi. There are many more studies in notebooks and loose sheets. All images authors own.



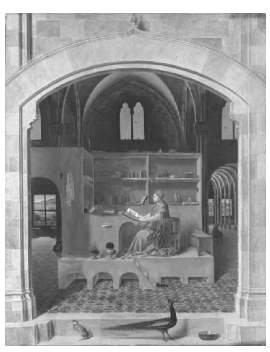


"*Forgetting Architecture* comes to mind as a more appropriate title for this book, since while I may talk about a school, a cemetery, a theatre, it is more correct to say that I talk about life, death, imagination."
(Rossi, *A Scientific Autobiography*, p. 34; p. 78)

"I would define the concept of *type* as something that is permanent and complex, a logical principle that is prior to form and that constitutes it."
(Rossi, *The Architecture of the City*, p. 40)

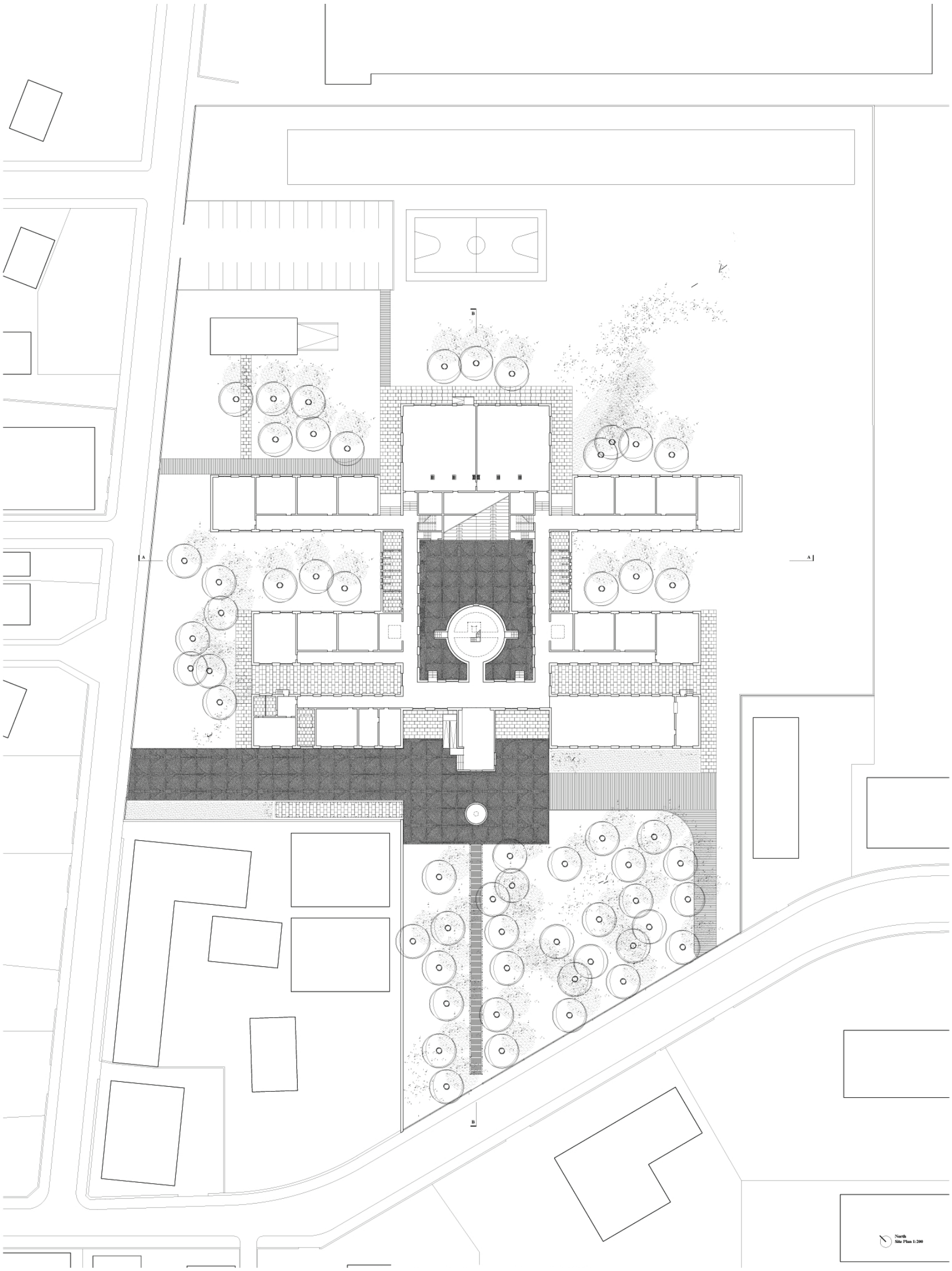
"By reason of the undoubted connection existing between all the parts of dream thoughts, the dream is able to embody this matter into a single scene [a composite image]. It upholds a *logical connection as approximation in time and space*... "
(Freud, *On Dreams*, p. 23)

"It not infrequently happens that, in the middle of the work of interpretation an omitted fragment of the dream comes to light and is described as having been forgotten till that moment. Now a part of a dream that has been rescued from oblivion in this way, is invariably the most important part."
(Freud, *The Interpretation of Dreams*, p. 518)

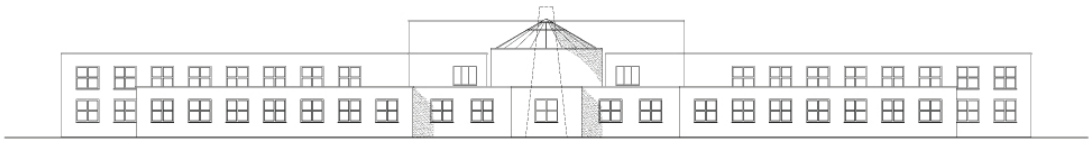


Aldo Rossi in His Study, May 2012.
An attempt to spatialise Rossi's thinking using the drawing entitled "Il tempo di una vicenda" from the Aldo Rossi in America: 1976 to 1979 exhibition catalogue. The library at Fagnano Olona School is used as the focal formal element. The montage examines the interrelationship of inside/outside, the logical/formal. It considers the relation of mind, room, building, city, landscape. The montage condenses the type-forms, type-elements, and monuments of the city, with the Po Valley landscape in the distance. Rossi sits drawing in his study like St. Jerome. While the drawing and photograph to the top are the authors, the images of the courtyard on the left and the gate on the right are from A Scientific Autobiography, and An Analogical Architecture respectively. The studies at the base are Rossi's from the exhibition catalogue, and Antonello da Messina's St Jerome from the National Gallery, London.

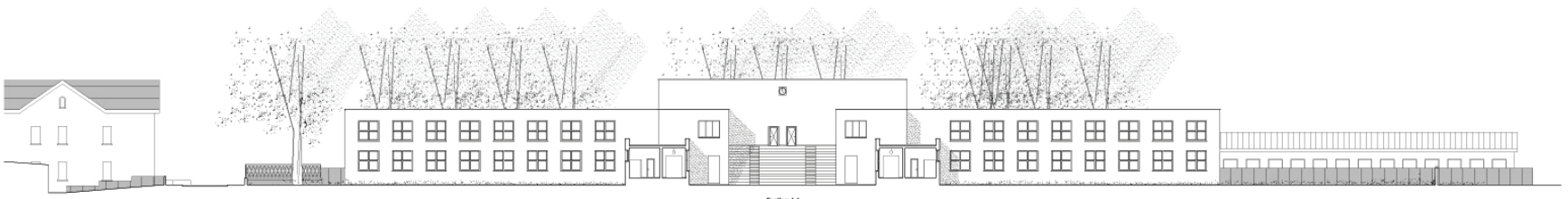
ALLEGORICAL-MONTAGE; IMAGE STUDY



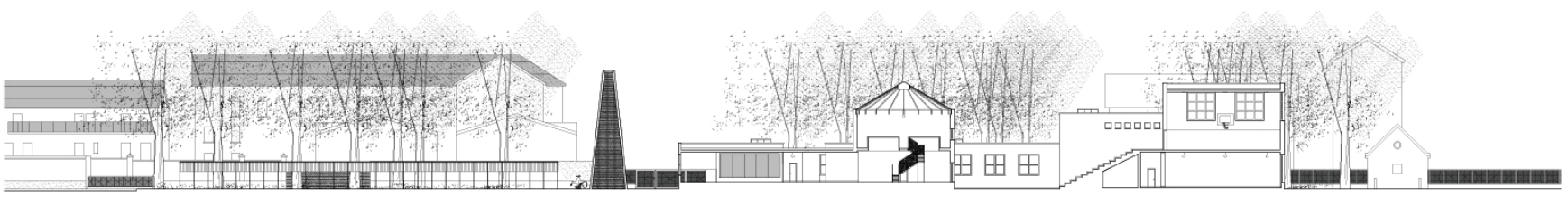
Study of Fagnano Olona School, April 2012.
Aldo Rossi's school at Fagnano Olona (1972-76), a small town, 40 km northwest of Milan, Italy is defined by its courtyard plan-form and axially-arranged accommodation. A conical brick chimney marks the entrance and primary axis of the school, which is organised northeast to southwest between an assembly hall and a linear pergola. Within the courtyard, wide steps lead to the gym on the northeast, from which one can look toward the cylindrical library with its glazed roof. Double-corridor wings surround the courtyard and contain twenty-two classrooms (over two floors), staff facilities and a dining hall. Drawing by author.



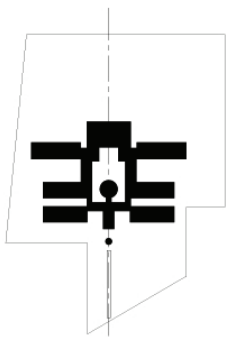
Entrance Elevation



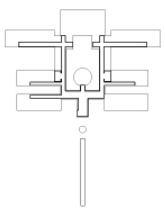
Section AA



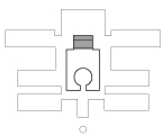
Section BB



Site extent and primary axis

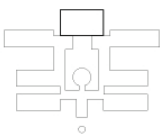


Entrance pergola and internal circulation

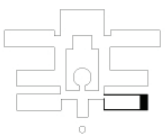


Courtyard and steps

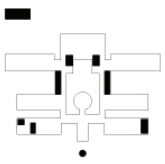
Library



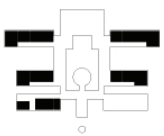
Assembly hall with gym above



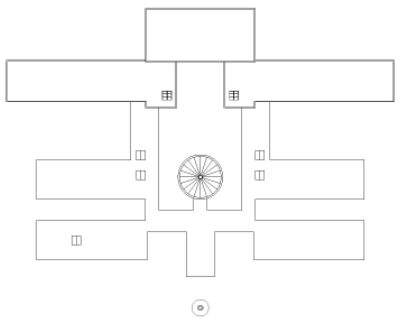
Dining and kitchen



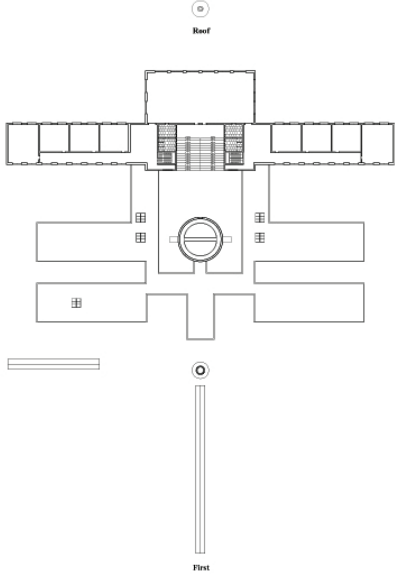
Ancillary, circular plant and janitor accommodation (to upper left)



Classrooms and staff rooms



Roof



First

Study of Fagnano Olona School, April 2012.
While the previous page shows the site plan of the school, this page shows the first floor plan, roof plan, diagrams at the centre of the parts of the school, a long and cross section, then main elevation at the top. Drawings by author.

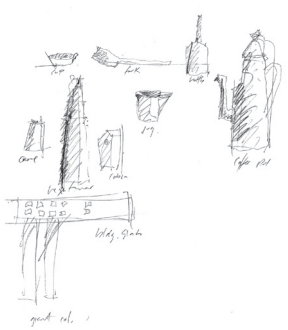


Fig 1.

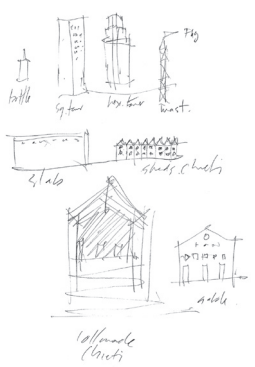


Fig 9.

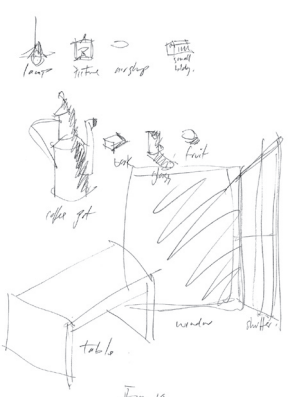


Fig 10

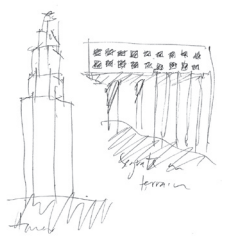


Fig 16

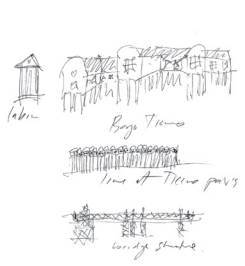


Fig 17

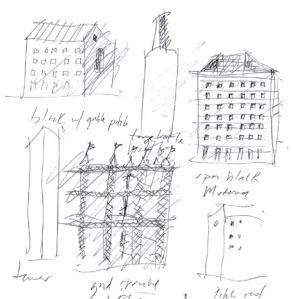


Fig 19.

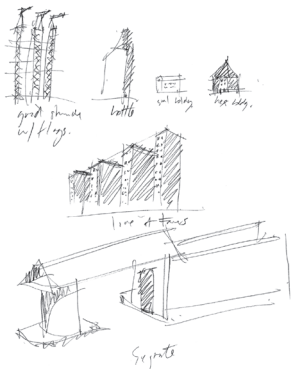


Fig 20

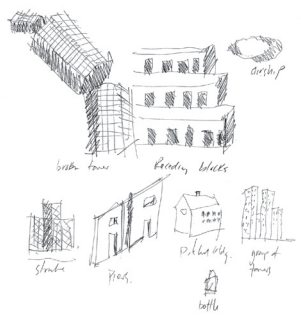


Fig 23

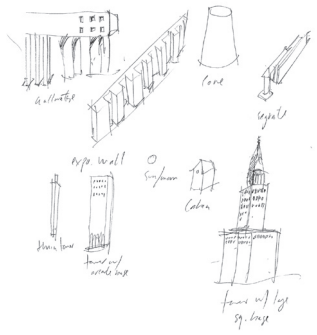


Fig 25.

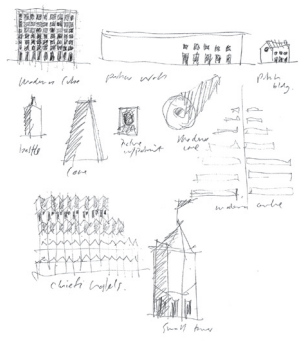


Fig 26

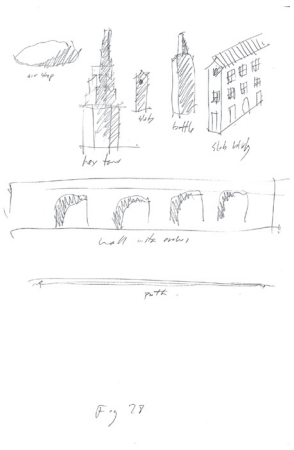


Fig 29

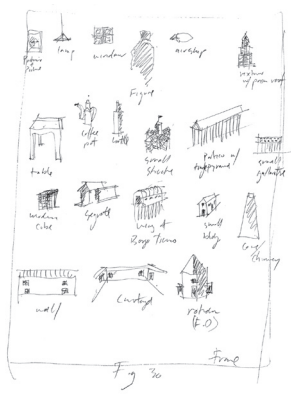
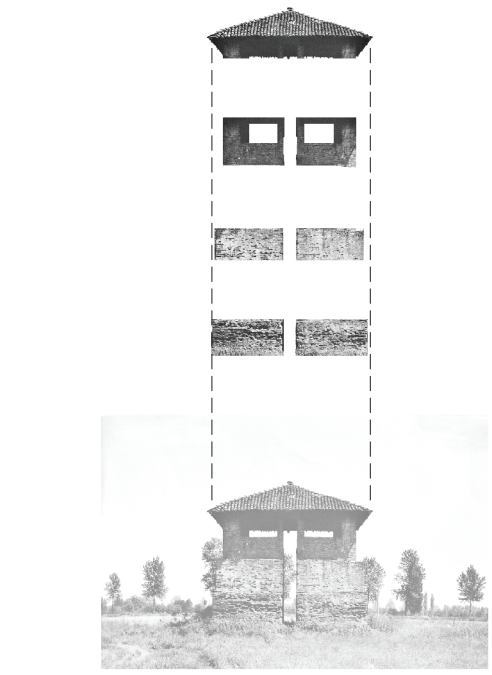


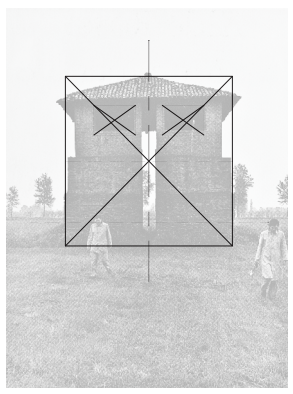
Fig 30

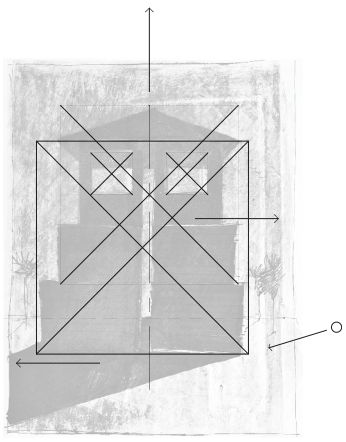
Studies of Aldo Rossi in America 1979 Exhibition of drawings of the Analogical City, July 2012.

Aldo Rossi was invited to exhibit drawings at the IUAS in New York in 1979. Above are a selection of my own studies of the thirty drawings from Rossi's Città Analoga series collected in the exhibition catalogue. They analyse the individual components that make up Rossi's stock of images: domestic objects, generic but formally defined urban buildings, buildings that are recognisably Rossi's, generic volumes, and single human figures. These have been de-montaged in my studies. Further to those documented above, are the remaining eighteen in a physical portfolio. All drawings authors own.

ANALYTICAL DE-MONTAGE; CRITICAL MIMESIS; IMAGE STUDY

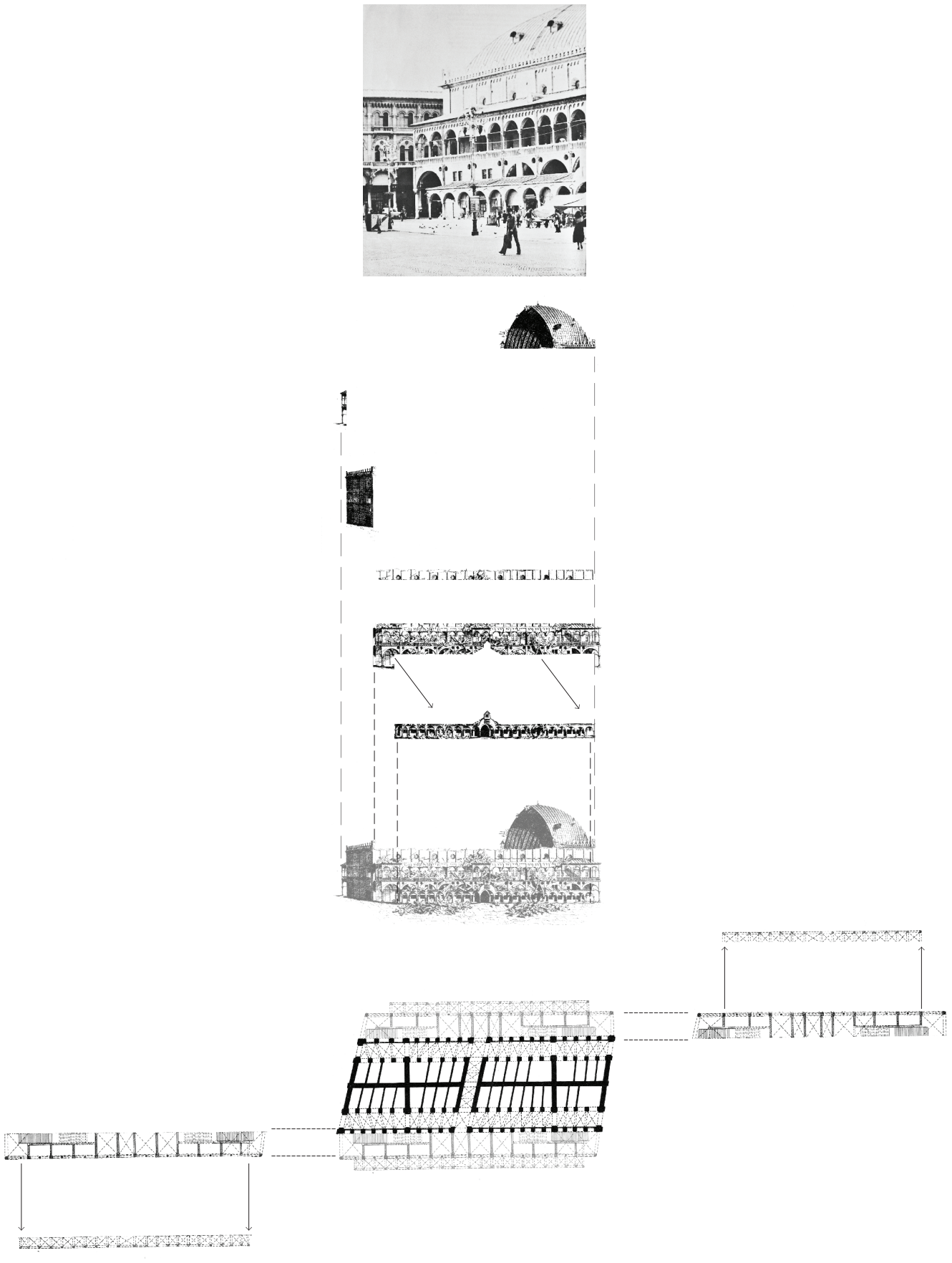




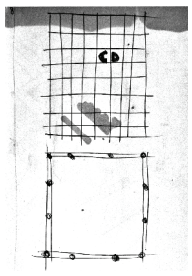


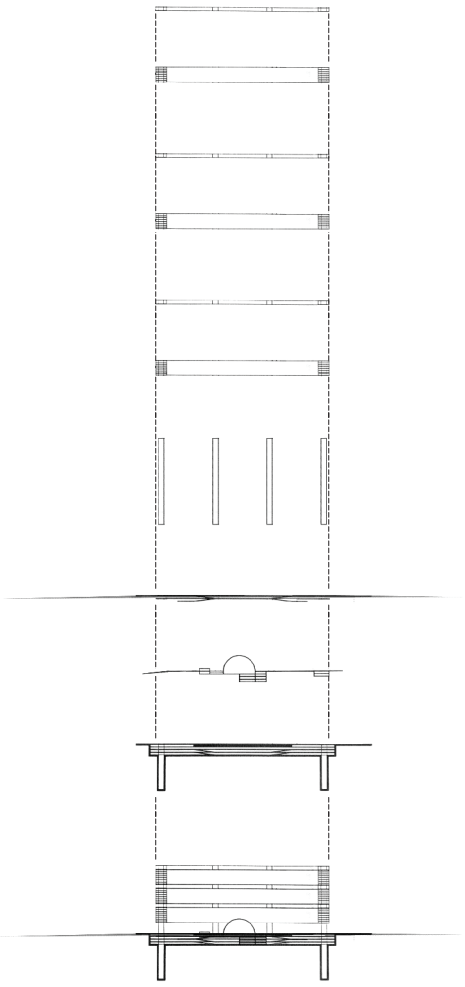
Study of Agricultural Construction, November 2012.
Study of an agricultural building from An Analogical Architecture that Rossi called an "archetypal object." There are two photographs of the same building, and a sketch study by Rossi. One photograph is in landscape without people, and another in portrait with people. Rossi is the figure on the left in this photograph. It is interesting to speculate at how Rossi's sketch modifies the original building, which is now extruded vertically, the background horizon is different and the trees reduce in scale. The result is a monumentalising of this anonymous construction. The photographs and sketch are by others, while the mark up overlay is my own.

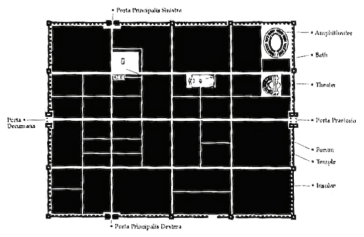
BUILDING STUDY; ANALYTICAL DE-MONTAGE

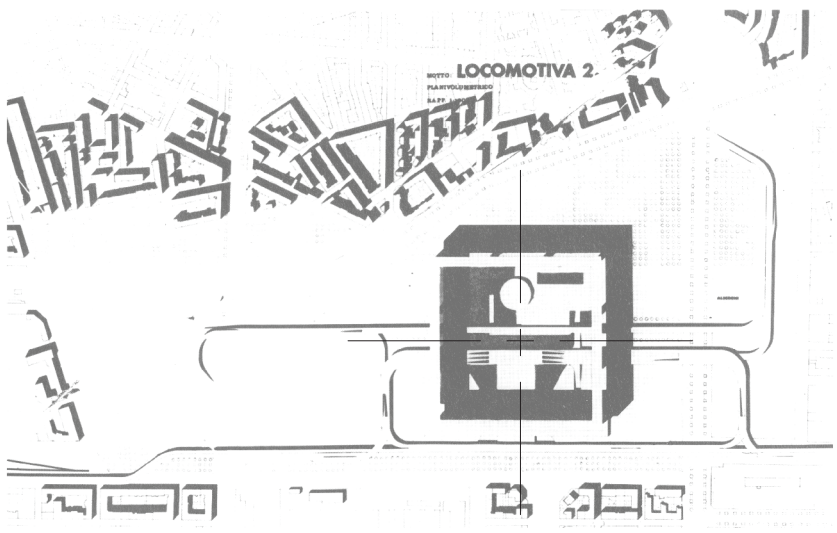


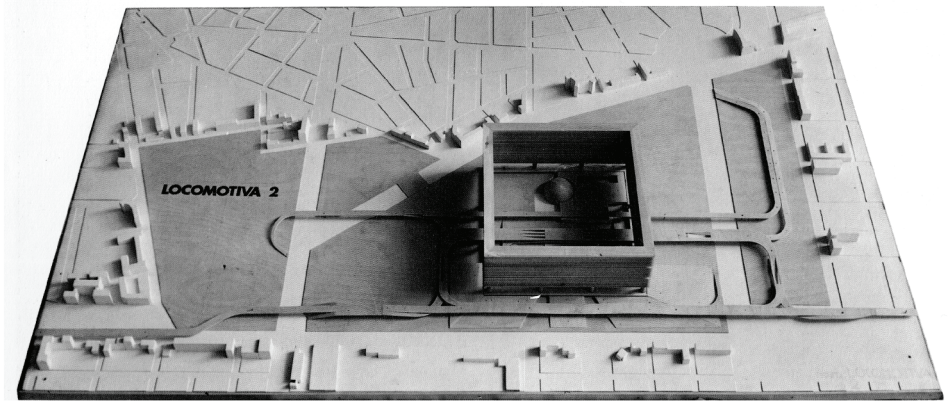
Study of Palazzo della Ragione, November 2012.
The Palazzo della Ragione (also refer page 29), an example of what Rossi called an urban artefact. The base drawings, and photograph view, are from Rossi's The Architecture of the City, with my own overlay. In this montage analysis, like those that follow, volumes are separated to indicate Rossi's additive and subtractive procedure. While the montage overlay is my own, as is the separating of forms, the material used is almost always either Rossi's drawings or images found in the work of Rossi.





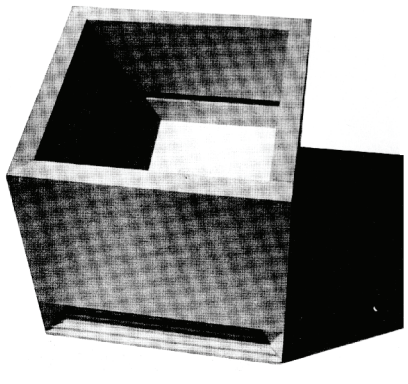


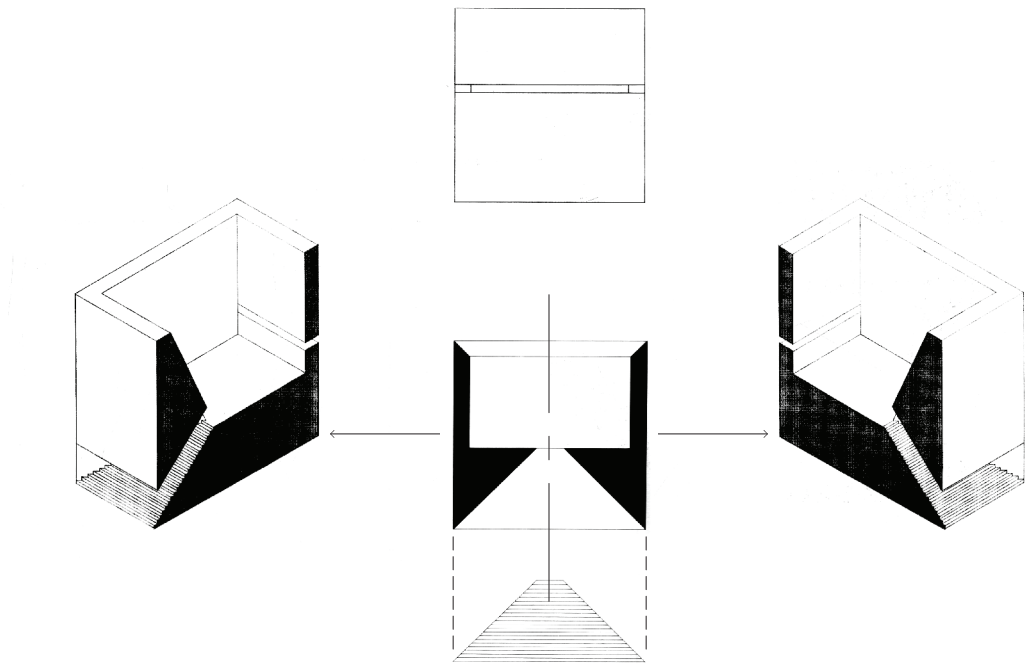


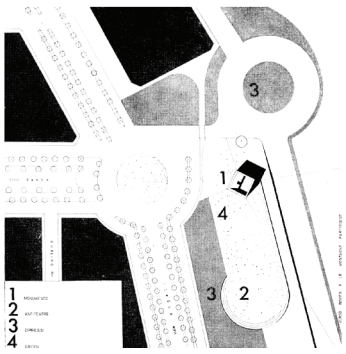


Study of 1962 Competition for Centro Direzionale, Turin, November - December 2012.
The square plan is an extrusion of the Turin grid, becoming the typological-form of the project. The extruded square is then relocated on the city periphery, which is the site defined by the competition brief so the project refers analogically to the Turin grid and to the origins of Turin as a Roman settlement. We can see the formal language of repetition and opposition. Seven single-storey floors of residential alternate with a two-storey public space. This pattern is repeated three times. Rossi collaborated with Luca Meda and Gian Ugo Polesello on this project. Montage overlay by author. Image on the upper left, the plan, and the scale model are by Rossi. The Roman plan is from Genealogy of Cities.

BUILDING STUDY; ANALYTICAL DE-MONTAGE

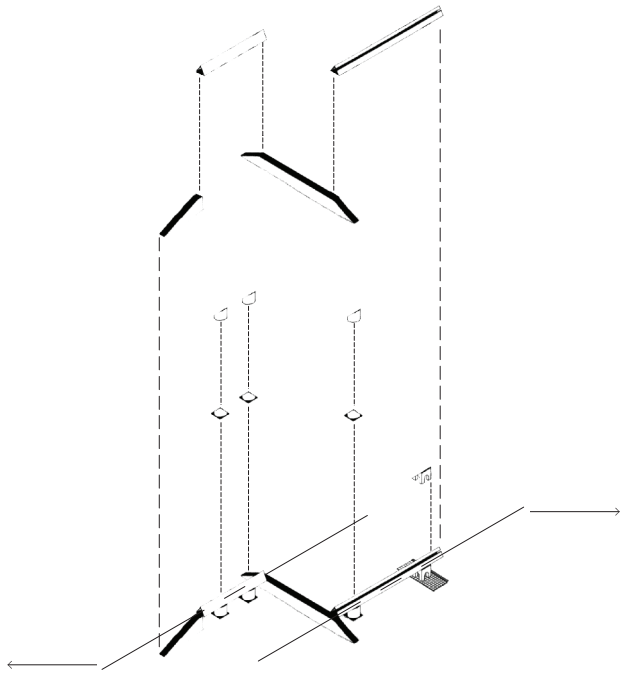


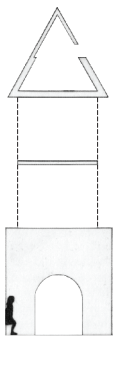




Study of 1963 Competition for a Monument to the Partisans, Cuneo, November - December 2012.
The monument is a 12m square-plan extruded to form a cube, with the top open to the air and steps that lead to an upper terrace. From here, a view is cut through an horizontal opening to the Boves mountains, which was the battlefield of the partisans fight against the Nazi's, and to which the monument is dedicated. The sides of the cube are not distinguished so remain as blank concrete walls. Rossi collaborated with Luca Meda and Gian Ugo Polesello on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

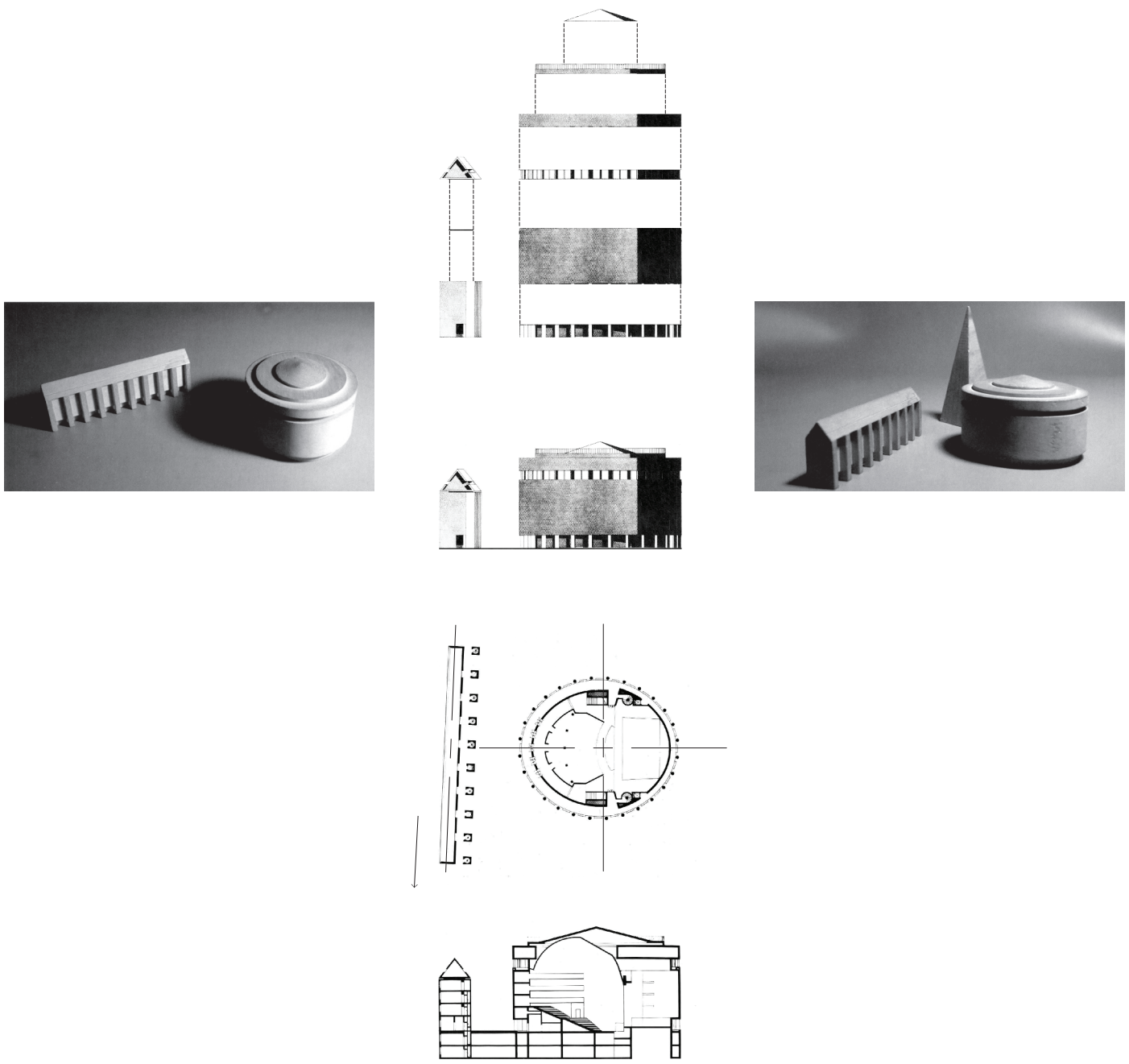
BUILDING STUDY; ANALYTICAL DE-MONTAGE





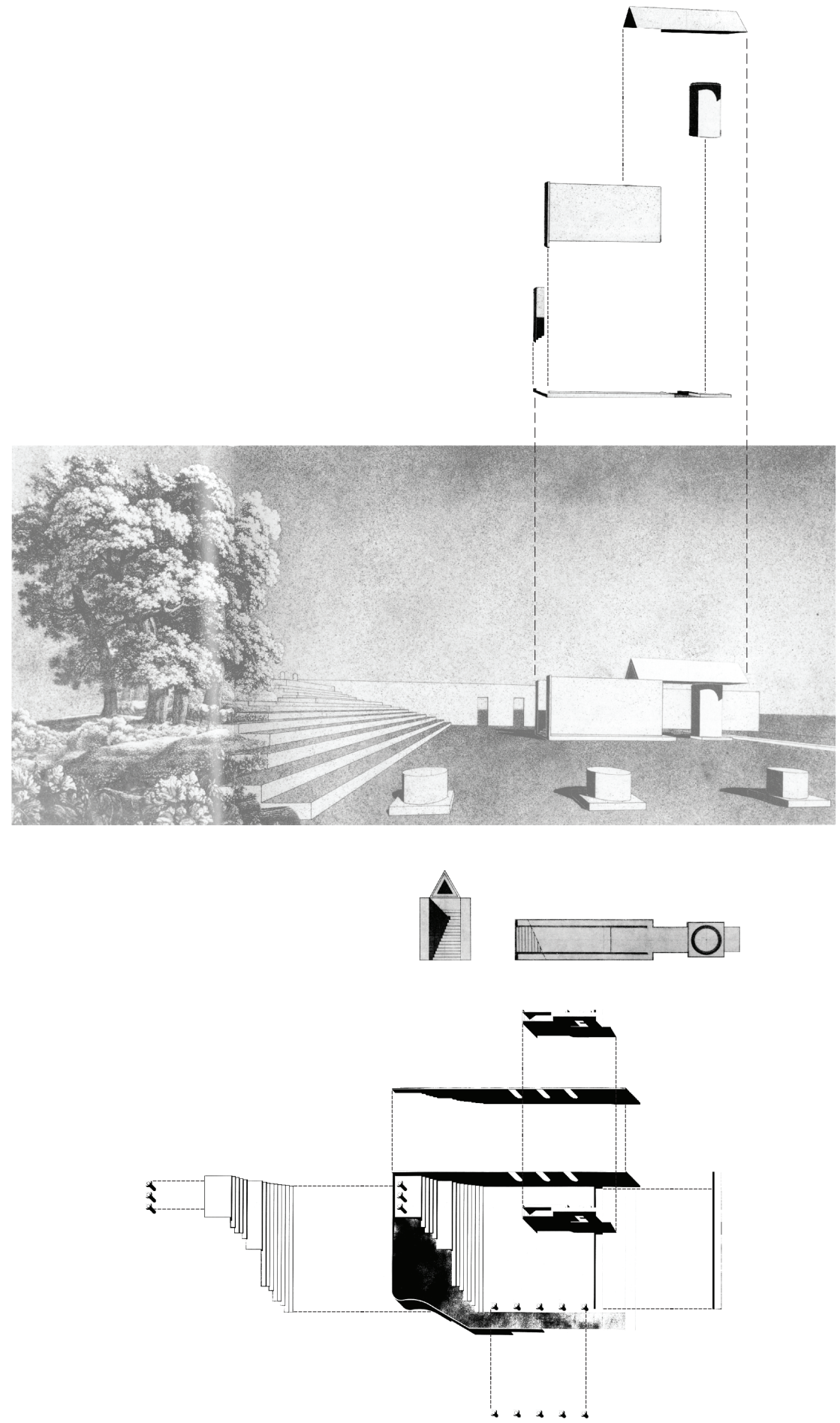
Study of 1964 Temporary Bridge for the Triennale, Milan, November - December 2012.
The bridge is divided in two and shifts off axis, linked by an elevated platform. The bridge's are both triangular in section. One of which is supported by two large circular columns with a square base. The other is supported, likewise, by large circular column with base and a cubed loggia-like structure, connoting a Sacro Monte chapel. In cross section we can see each of these components articulated as separate elements. Rossi collaborated with Luca Meda on this project. Montage overlay by author. Photographs by Rossi, from The Architecture of the City (top), Works and Projects (left and right).

BUILDING STUDY; ANALYTICAL DE-MONTAGE

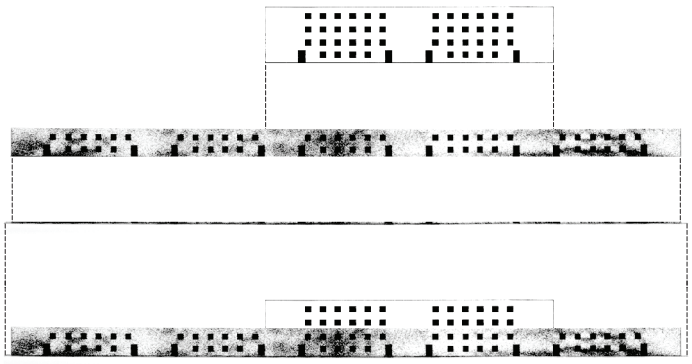


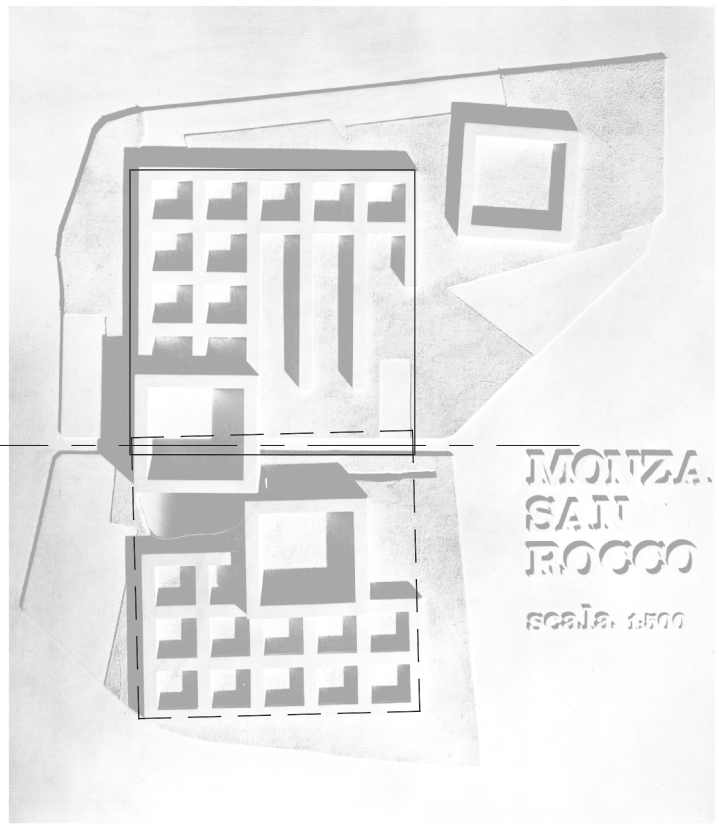
Study of 1964 Competition for the Paganini Theatre, Parma, November - December 2012.
A formal opposition is evident in the elliptical plan-form of the theatre and the linear porticoed block of accommodation, between which a small piazza is defined. The separation of these two components is reinforced by the shift off axis of the porticoed block. Both the theatre and the block display a gradual addition of elements. In the former, a continuous colonnade surrounds the theatre with the main body separated by clerestorey glazing from a conical roof. The accommodation block is made up of a porticoe of piers, above which is the office accommodation, topped by a triangular roof. These components are linked underground by services. In the scale model, the buildings are distributed freely and appear as if we can place them in new combinations for an alternative project. Rossi collaborated with Luca Meda on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

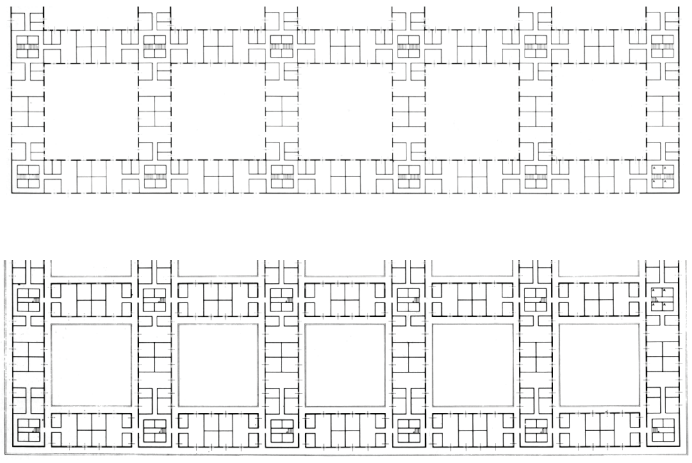
BUILDING STUDY; ANALYTICAL DE-MONTAGE



Study of 1965 Monument and Piazza, Segrate, November - December 2012.
The piazza at Segrate is defined at its four edges by separate typological-elements. As we view the drawing, a wall to the top, an elongated pool for water to the right, a row of four half-columns to the bottom, and a series of steps and platforms to the left. The principle focus of the piazza is the monument to the partisans, which is placed parallel with the wall and off centre within the piazza. The monument itself is a composition of geometrical forms: two walls enclose a flight of steps which rise to a small platform, a triangular-prism element is supported by a circular column on top of a square base. The monument is a fountain and water flows into the pool from the triangular-prism. Montage overlay by author. Base images by Rossi from Works and Projects.

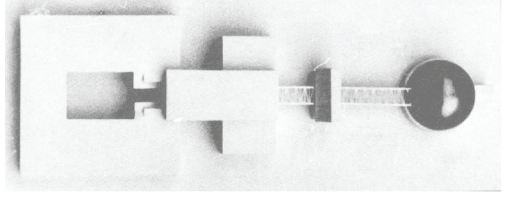


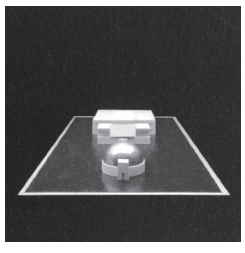


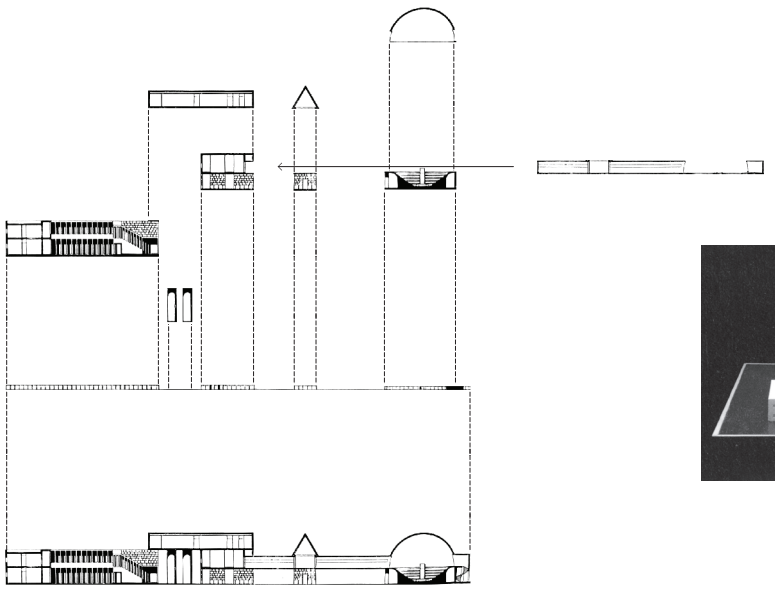


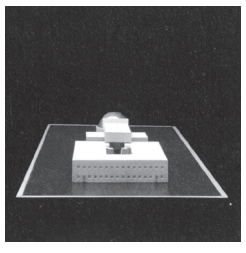
Study of 1966 Competition for a Housing Area, San Rocco, November - December 2012.
A grid is extruded to articulate the courtyard as the typological-form of the project. The overall form is such that two squares interlock at the point the two larger courtyards meet. A road separates the two squares, and the lower is shifted off the axis of the road. There is a tension between the smaller courtyards and the three larger courtyards, which are doubled in height to correspond with there larger dimension. A step forms a small plinth. Rossi collaborated with Giorgio Grassi on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

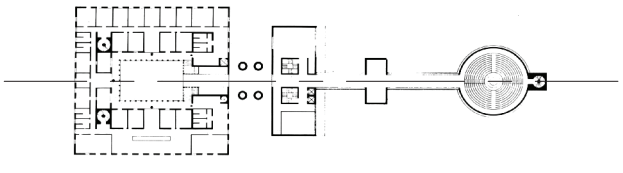
BUILDING STUDY; ANALYTICAL DE-MONTAGE





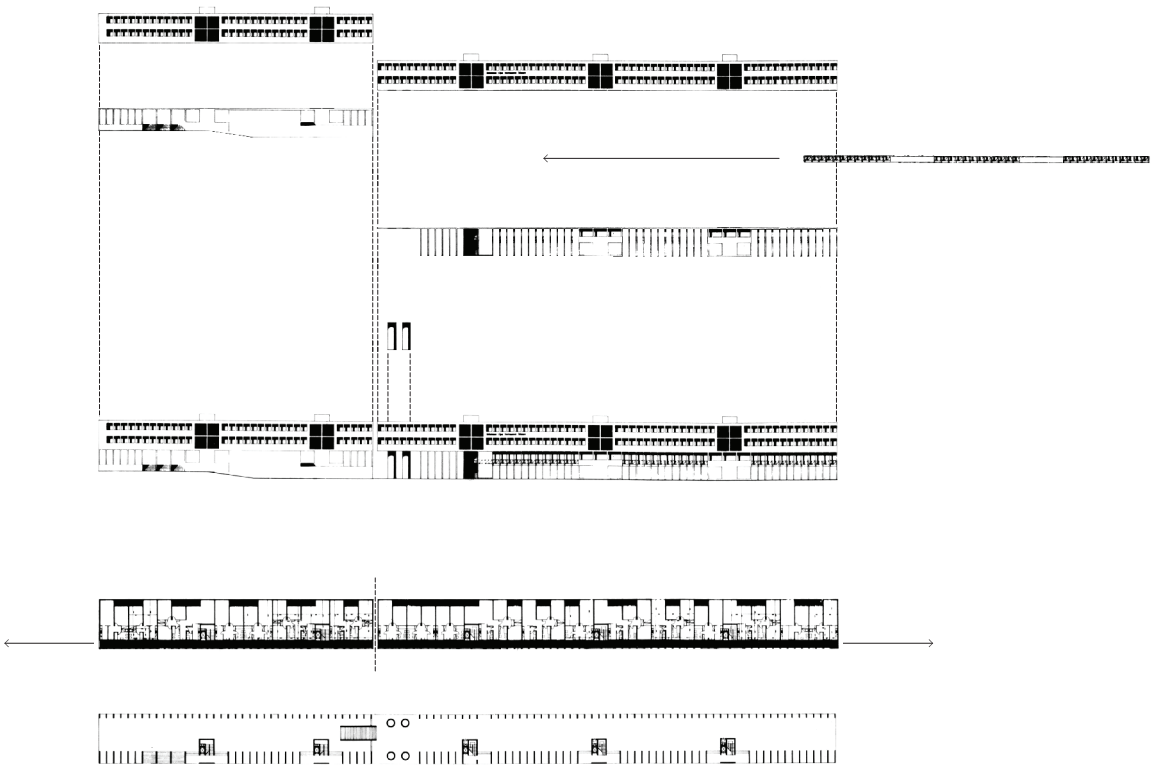


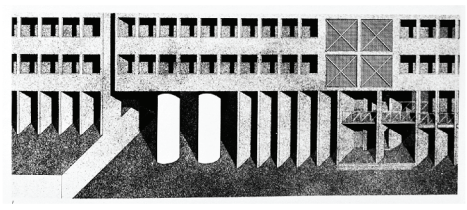




Study of 1968 Competition for a Town Hall, Scandicci, November - December 2012.
A series of separate components are connected by an elevated walkway. Each component is its own typological-form: square-plan courtyard block, linear walkway, giant order circular-columns, gabled exhibition hall, and circular-plan domed council hall. A stone plinth visually connects the components. Rossi collaborated with Massimo Fortis and Massimo Scolari on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

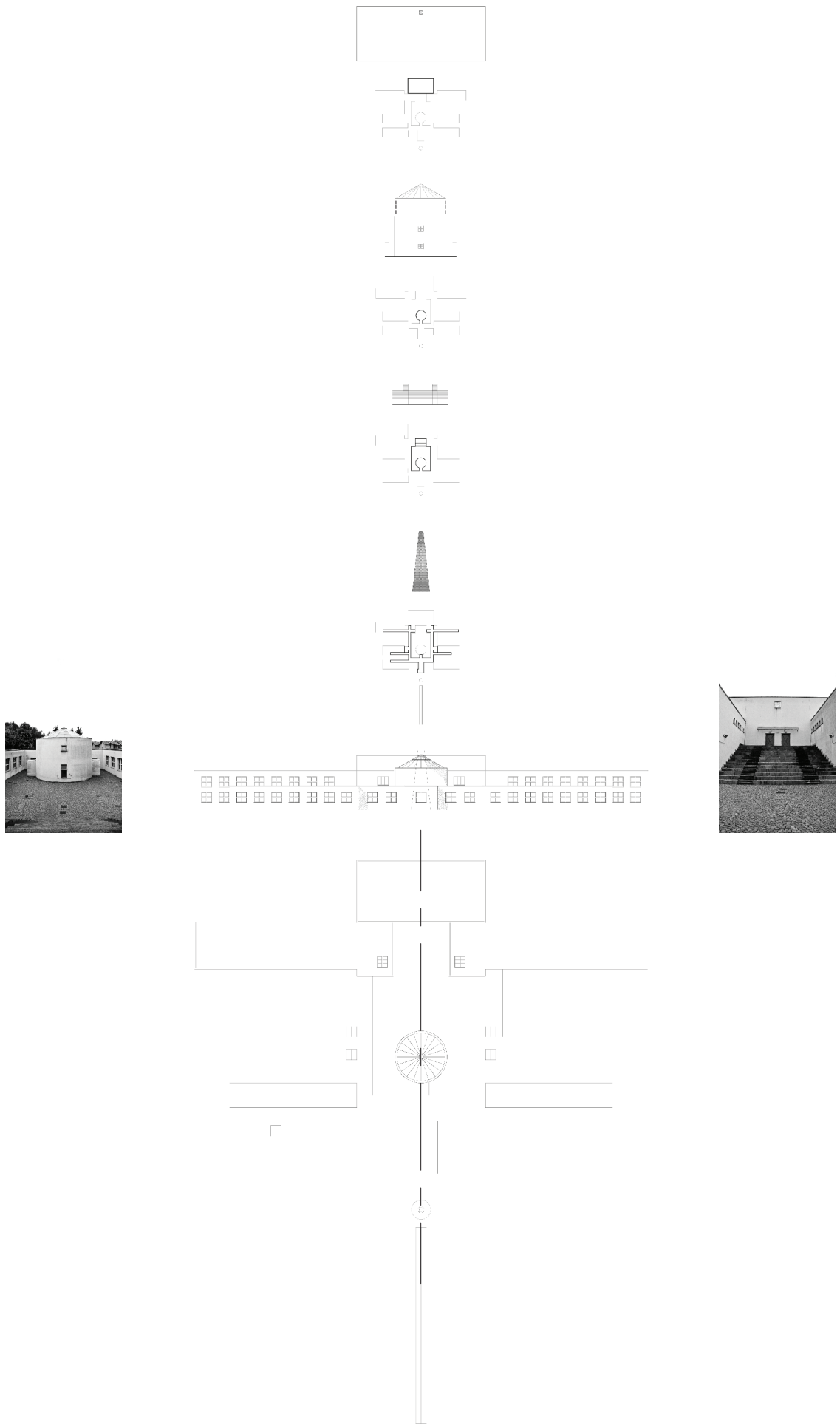
BUILDING STUDY; ANALYTICAL DE-MONTAGE





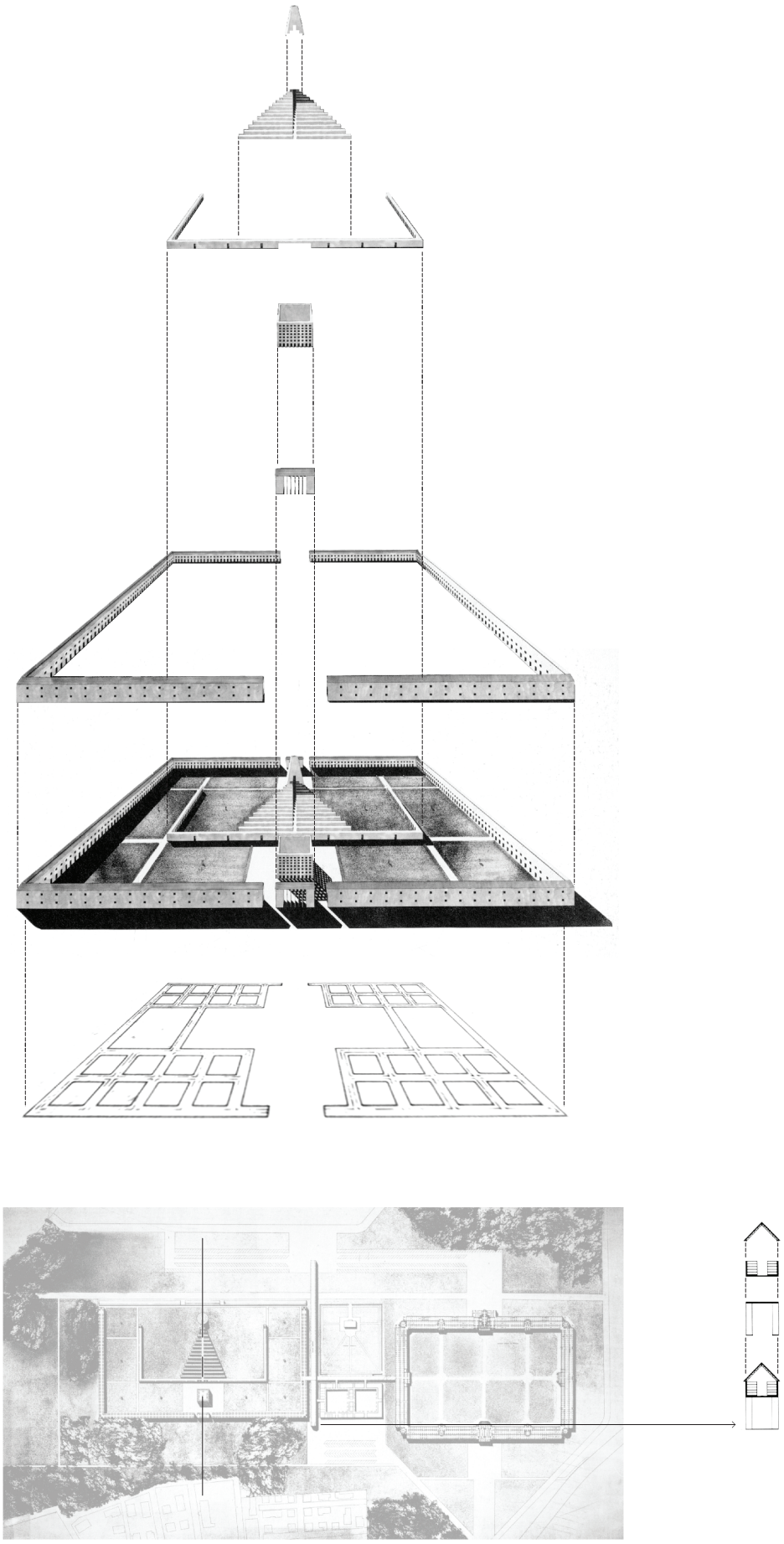
Study of 1968-73 Housing Block, Gallaratese Milan, November - December 2012.
The typological-form is a long slab volume, with an outside walkway extending linearly. Apartments are entered from this walkway. Underneath, is an outside colonnade which runs the extent of the building. A change in level two thirds of the way along the volume is articulated by the separation of the slab, with steps joining the two building parts. Four large circular columns, without bases vary the piered colonnade. Rossi's building is within an overall district plan by Carlo Aymonino. Montage overlay by author. Base images by Rossi from Works and Projects. Top and bottom photograph from The Architecture of the City. Sketch study second from bottom from Lotus 7.

BUILDING STUDY; ANALYTICAL DE-MONTAGE



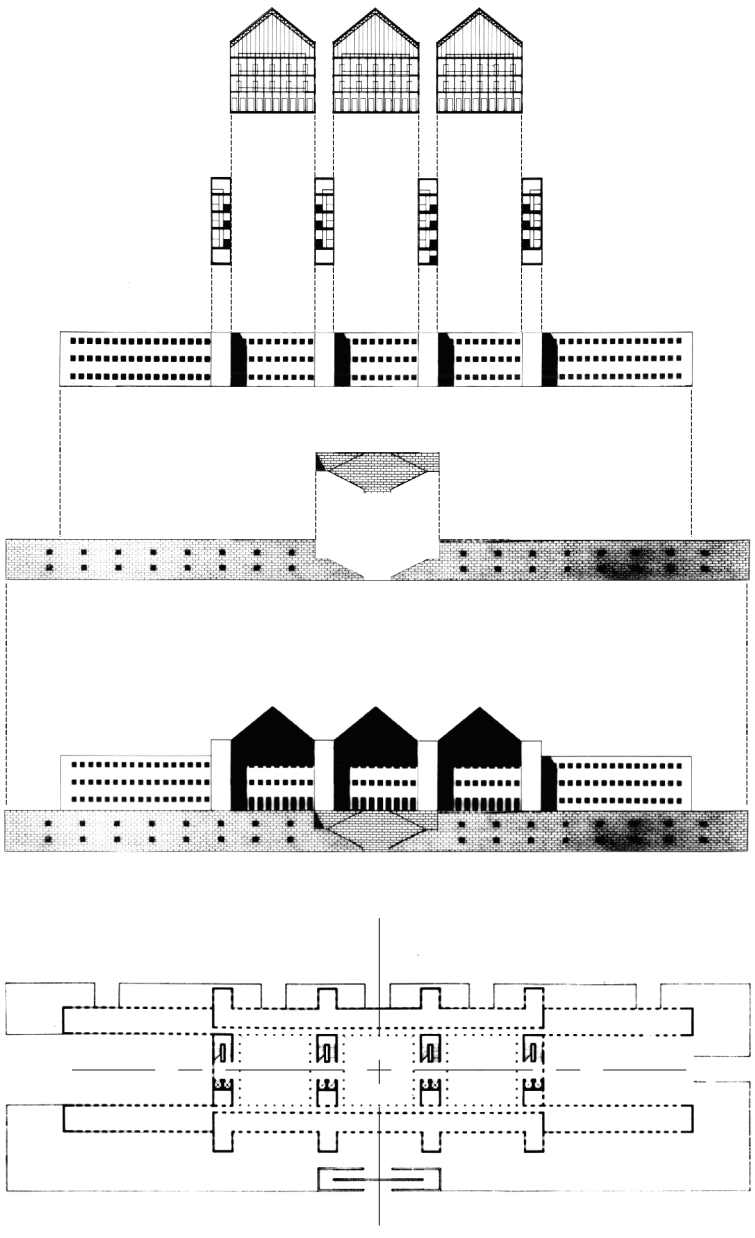
Study of 1972-76 Intermediate School, Fagnano Olona, November - December 2012.
The school is axially planned with classroom accommodation arranged within wings that extend outward from the central courtyard. Within the courtyard a library, circular in plan, sits opposite tiered steps which lead to an upper floor platform and the gym hall. The entrance to the school is articulated by a large clock and conical chimney, which is reached by a long pergola with pitched roof. Rossi collaborated with Giovanni Braghieri and Arduino Cantafora on this project. Drawings and photographs by author.

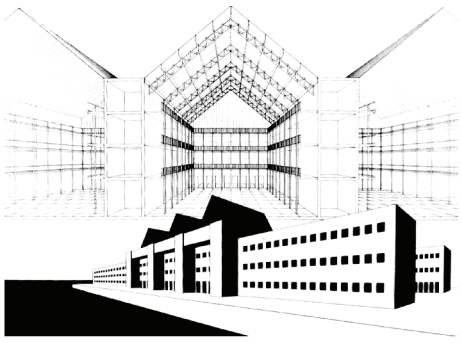
BUILDING STUDY; ANALYTICAL DE-MONTAGE



Study of 1972-83 Cemetery, Modena, November - December 2012.
The cemetery is located to the northwest of Modena. It is composed of a number of separate components, axially arranged, set within a perimeter block made up of a colonnade. The perimeter block contains the columbaria above the colonnade, and is topped by a triangular roof. A gateway block is set within the perimeter block and articulates the main axis. Within the grounds of the perimeter block are arranged a central spine containing the ossuaries, and a cone containing the common grave, surrounded by a C-form block. Outside these elements and still within the perimeter block is an hollow cube as a sanctuary to the war dead. Rossi conceived the cemetery as a city of the dead, with individual monuments above ground, and collective tombs under ground within a grid similar to the housing of San Rocco. The cemetery remains unfinished. Rossi collaborated with Giovanni Braghieri on this project. Montage overlay by author. Base images by Rossi from Works and Projects and Lotus 38.

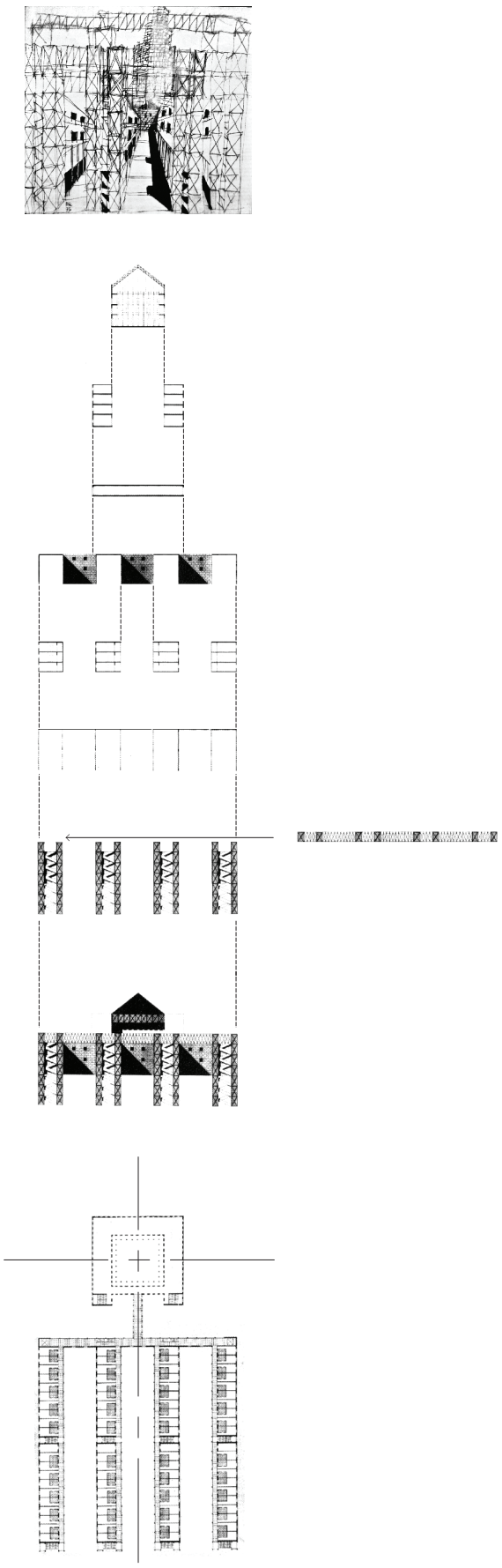
BUILDING STUDY; ANALYTICAL DE-MONTAGE





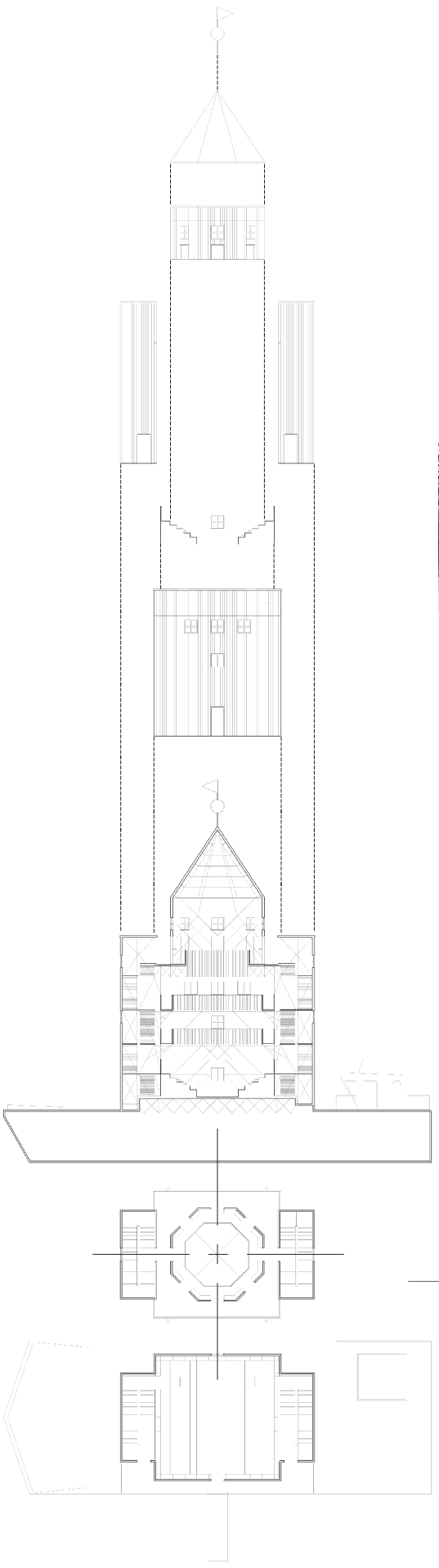
Study of 1974 Competition for a City Hall, Trieste, November - December 2012.
The City Hall is aligned with the Trieste harbour. Planned around three square-plan halls covered by three glazed pitched-roofs, and connected at ground floor level, seperated on upper floors by a series of circulation cores. Elevated walkways run lengthways to connect the office blocks. The project is built on a two-storey plinth with a central flight of steps that lead to the waterfront. Rossi collaborated with Max Bosshard, Giovanni Braghieri on this project. Montage overlay by author. Base images by Rossi from Works and Projects. Top photograph from A Scientific Autobiography.

BUILDING STUDY; ANALYTICAL DE-MONTAGE



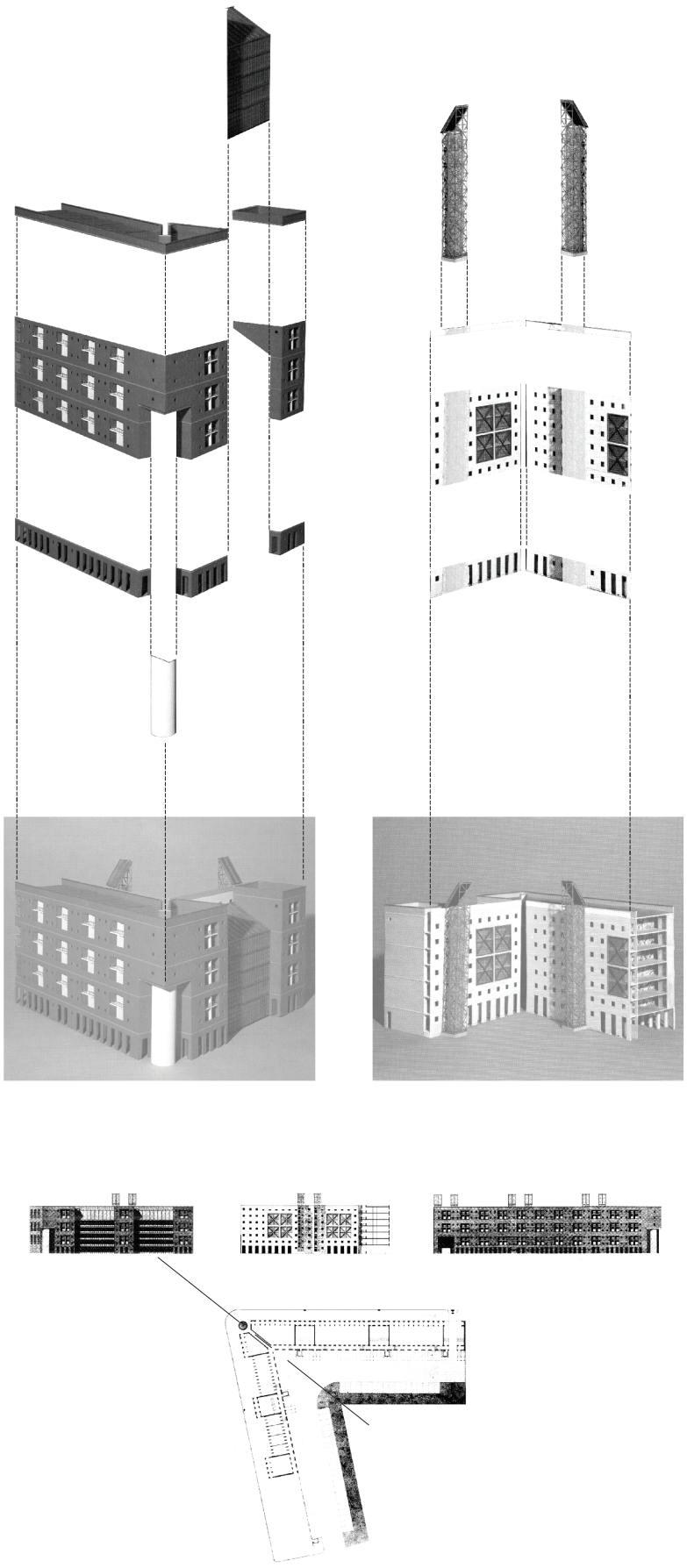
Study of 1974 Competition for a Student Hostel, Trieste, November - December 2012.
A square-plan building with covered central hall is separated from four linear three-storey wings supported above the ground by thin columns. The former contains the administrative and communal services such as dining hall, bar, and library. The latter contains the private student rooms and extends from the main building, with rooms accessed via linear walkways. Three more walkways extend transversely to connect each block. Rossi collaborated with Max Bosshard, Giovanni Braghieri, and Arduino Cantafora on this project. Montage overlay by author. Base images by Rossi from Works and Projects. Top sketch study from Lotus 11.

BUILDING STUDY; ANALYTICAL DE-MONTAGE



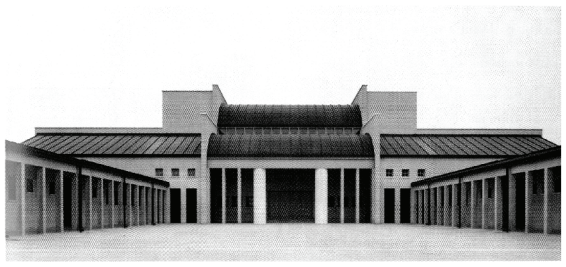
Study of 1980 Temporary Pavilion for the Biennale, Venice Teatro del Mondo, November - December 2012.
The theatre takes its typological idea from the floating theatres of Renaissance Venice and is formed by a series of geometrical volumes. The main volume is square in plan, and rises three storeys. It contains the performance space either side of which are tiered steps for seating. Above the stage are a sequence of balconies, reached via stairways which are clearly articulated externally. An octagonal form tops the main volume and is set slightly within the square of the plan providing space for a top floor external balcony. A tetrahedron roofs the floating theatre, which is terminated by a metal flag and globe. The theatre was towed to the Punta della Dogana in the Venetian lagoon, then travelled by sea to Dubrovnik where it was disassembled. Main drawing authors own. Photograph on left from Works and Projects. Photograph on right, A Scientific Autobiography.

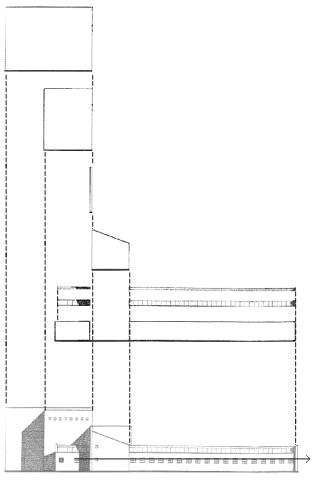
BUILDING STUDY; ANALYTICAL DE-MONTAGE

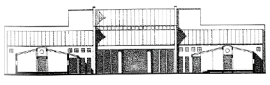


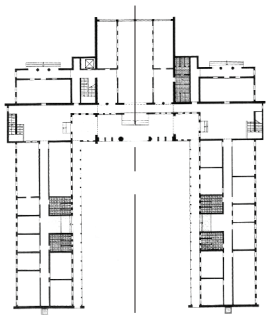
Study of 1981-88 Wilhelm and Kochstrasse Housing Complex for IBA, Berlin, November - December 2012.
Conceived as a perimeter block, only one corner of this housing project was built. The corner itself is articulated by an over scaled circular column with the two street sides expressed differently. One side is horizontally articulated with a ground floor arcade, above which are apartments, and topped by a cornice defined by a single course of brick. The other side is vertically articulated and alternates between single-pitch solariums and tall blocks which have the effect of towers. The ground floor arcade returns on the garden side where it becomes an entrance walkway. A series of stair towers on the garden side are separate to the main volume. Rossi collaborated with Giovanni Braghieri, Joy Johnson, and Christopher Stead on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

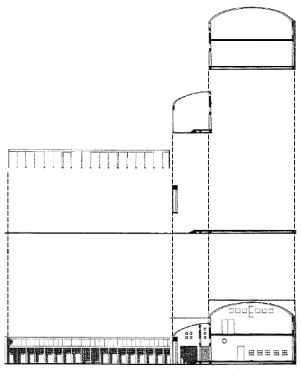
BUILDING STUDY; ANALYTICAL DE-MONTAGE





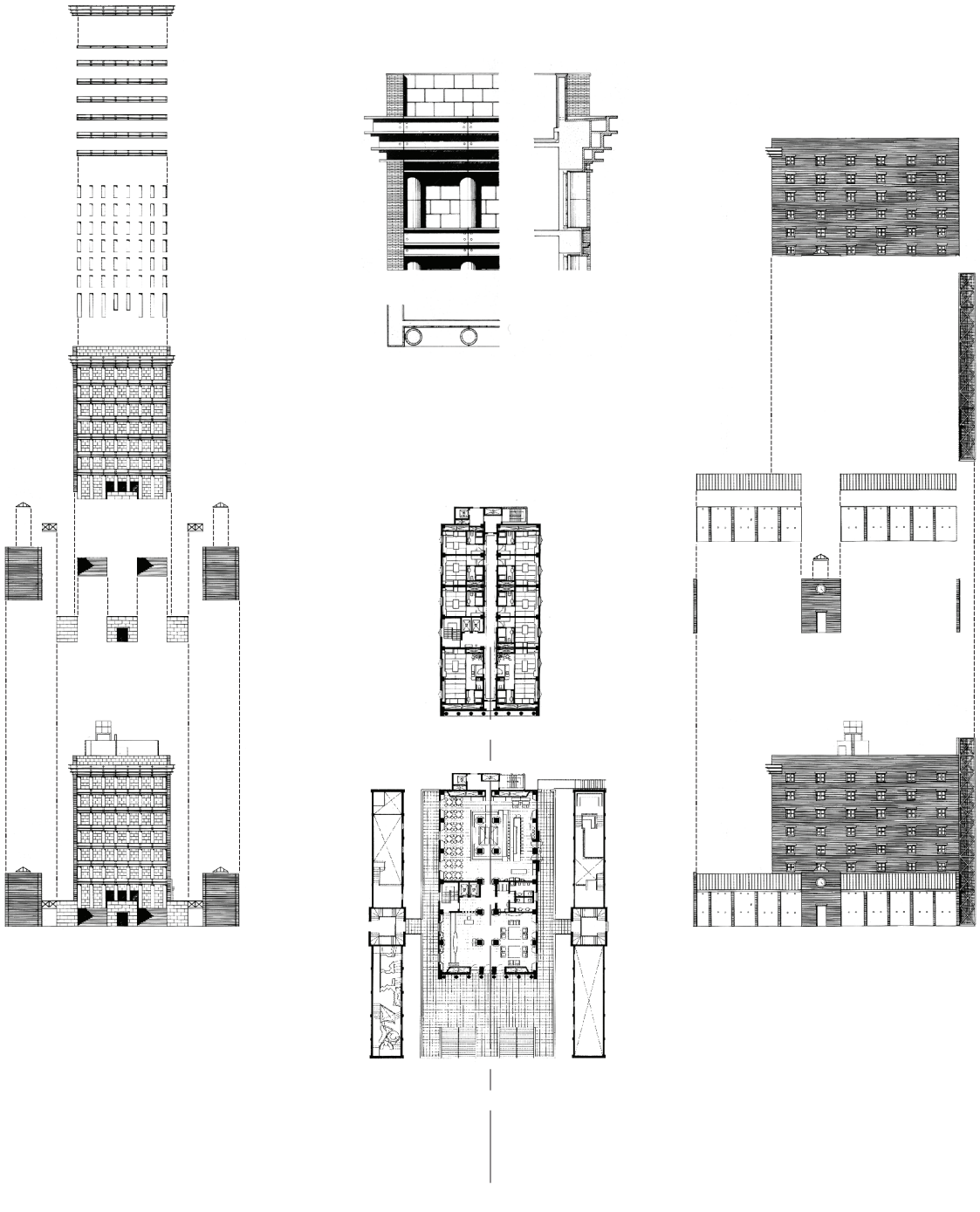






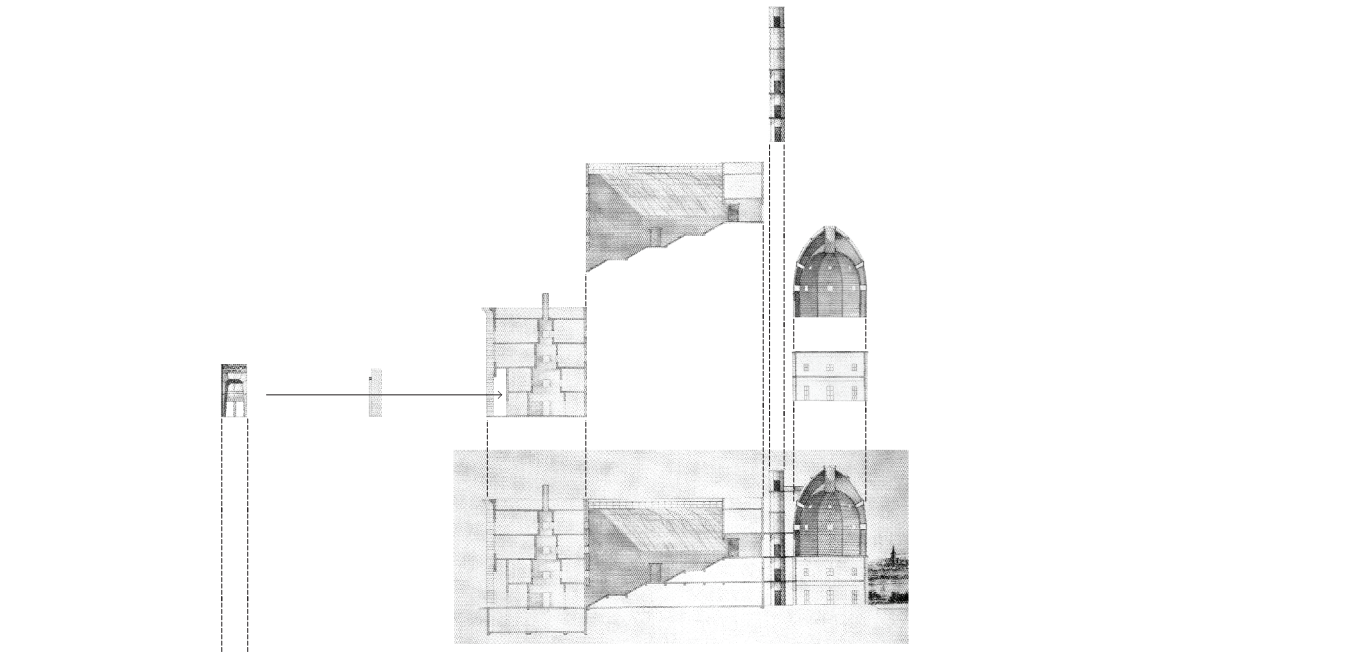
Study of 1983 - 1988 Town Hall, Borgoricco, November - December 2012.
Formed by a main larger volume and two wings that extend from this to define a courtyard that is ligned by a colonnade. The main volume contains a library, museum, archive, and council rooms, and is accessed via the courtyard side. The single storey wings contain offices. Rossi collaborated with Massimo Scheurer and Marino Zancanella on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

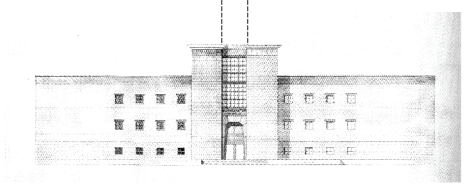
BUILDING STUDY; ANALYTICAL DE-MONTAGE

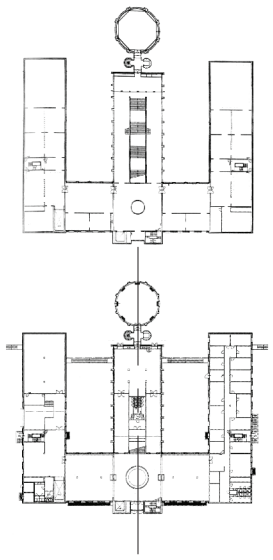


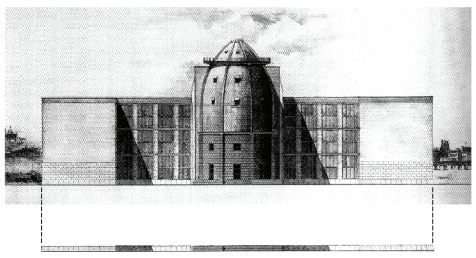
Study of 1987 - 1989 Hotel, Fukuoka, November - December 2012.
The hotel block sits on a storey plinth reached by two sets of stairs. The hotel is set back slightly so forming an upper terrace. To either side of this are wings which contain restaurants and bars. A post and beam grid is applied to the main elevation of the hotel block which covers a blank façade. Rossi collaborated with Morris Adjmi, Toyota Horiguchi, and Shigeru Uchida on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

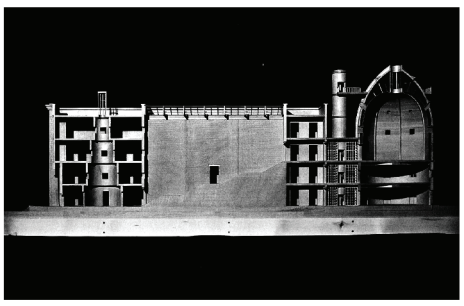
BUILDING STUDY; ANALYTICAL DE-MONTAGE





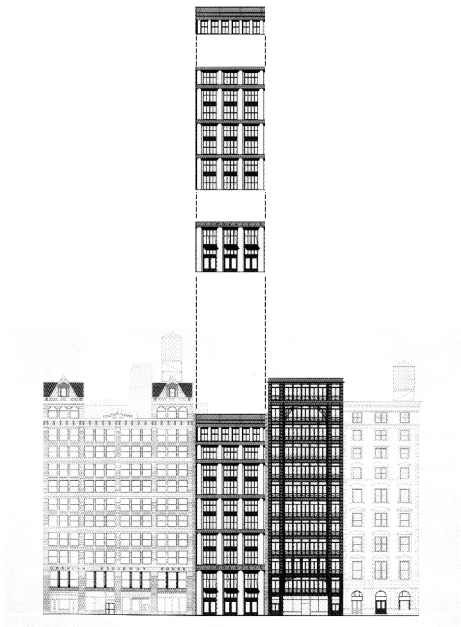


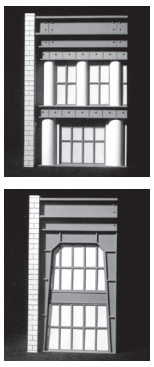


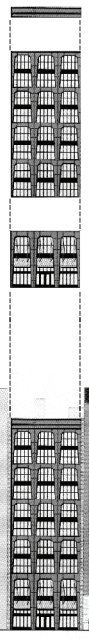


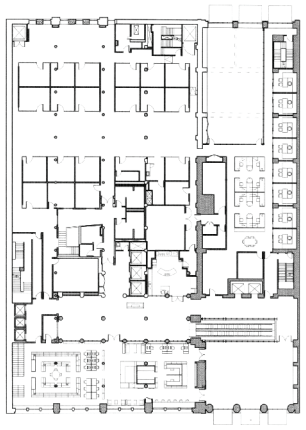
Study of 1990-94 Bonnefanten Museum, Maastricht, November - December 2012.
Situated on the River Maas, the museum forms an E-plan, with the wings extending to the water edge. The entrance, a wide stair, and a rotunda element are on the central axis of the E. The ground floor and first floor contain archive, administration and cellular accommodation, while the second floor and top floor hold exhibition spaces. The rotunda, which also connotes an industrial silo, is for special exhibitions. Rossi collaborated with Umberto Barbieri, Giovanni da Pozzo, and Marc Kocher on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

BUILDING STUDY; ANALYTICAL DE-MONTAGE



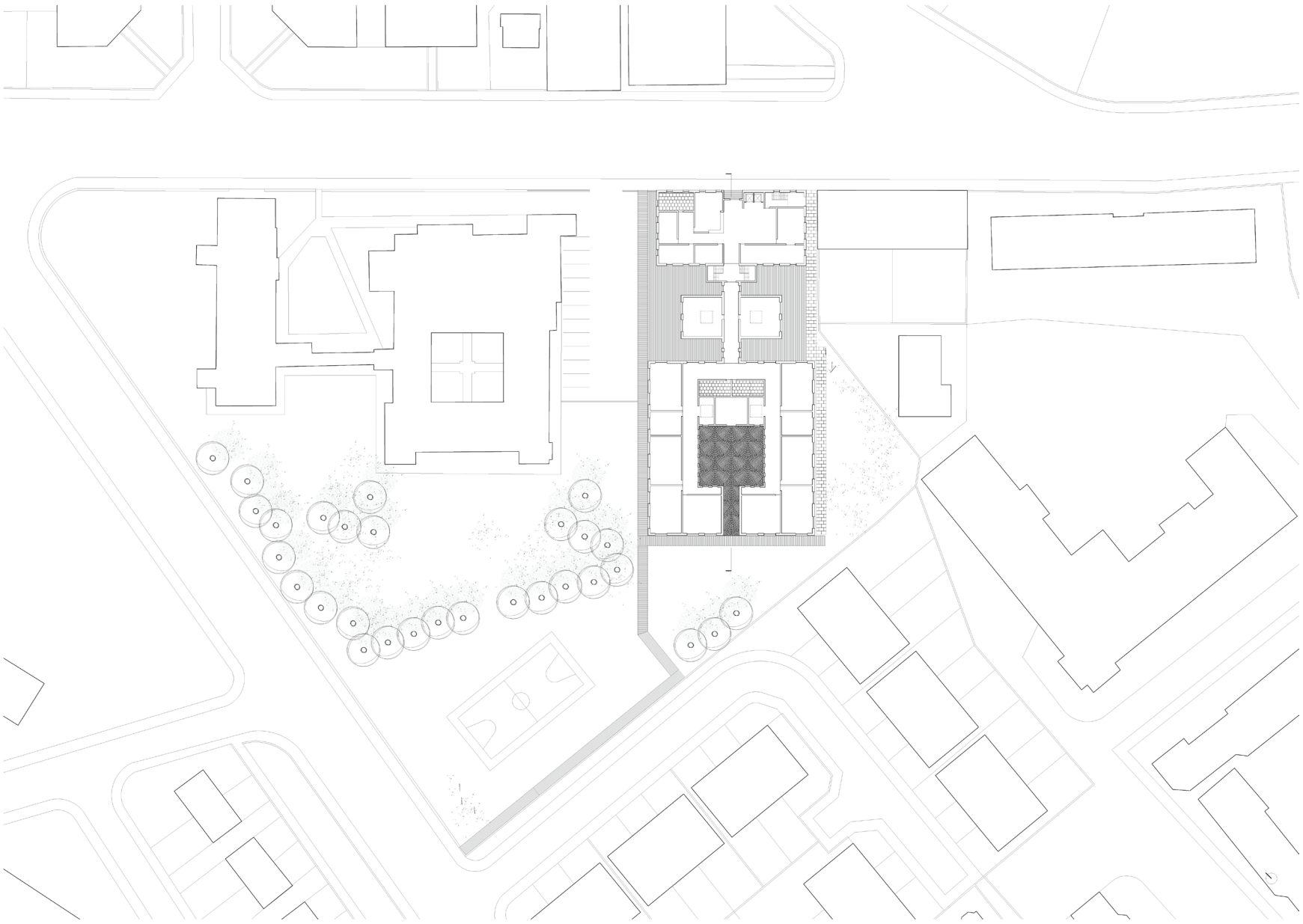


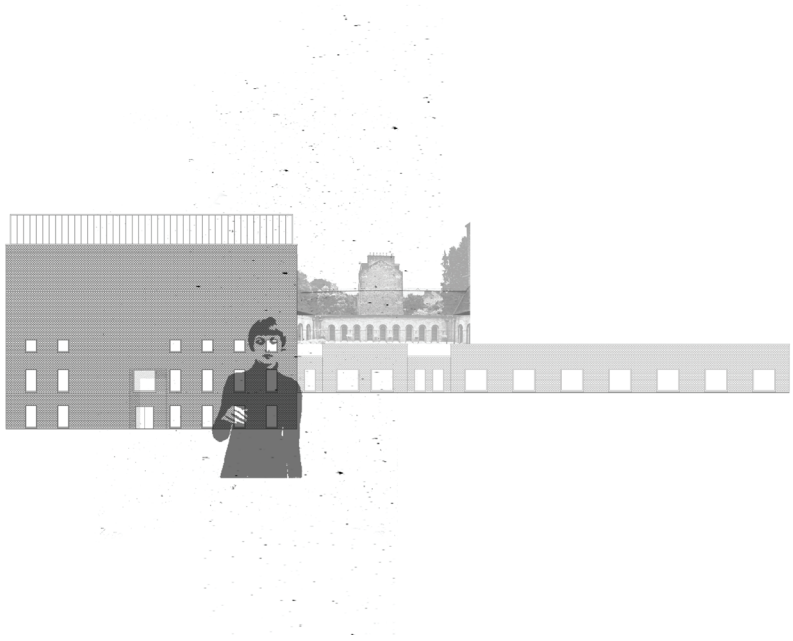


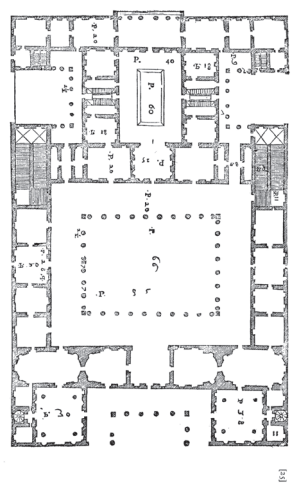


Study of 1994-2001 Scholastic Office, New York, November - December 2012.
The building fills the extent of a narrow plot between Mercer Street and Broadway, resulting in two separate elevations. The elevation on Broadway is an exposed post and beam structure that reduces in scale at the top, where the horizontal bays become closer. A curtain wall is set behind. Another beam is used as a cornice. On Mercer Street, the elevation is industrial in appearance, with a reduced difference in the vertical bays. Rossi collaborated with Morris Adjmi and Wes Wolfe on this project. Montage overlay by author. Base images by Rossi from Works and Projects.

BUILDING STUDY; ANALYTICAL DE-MONTAGE

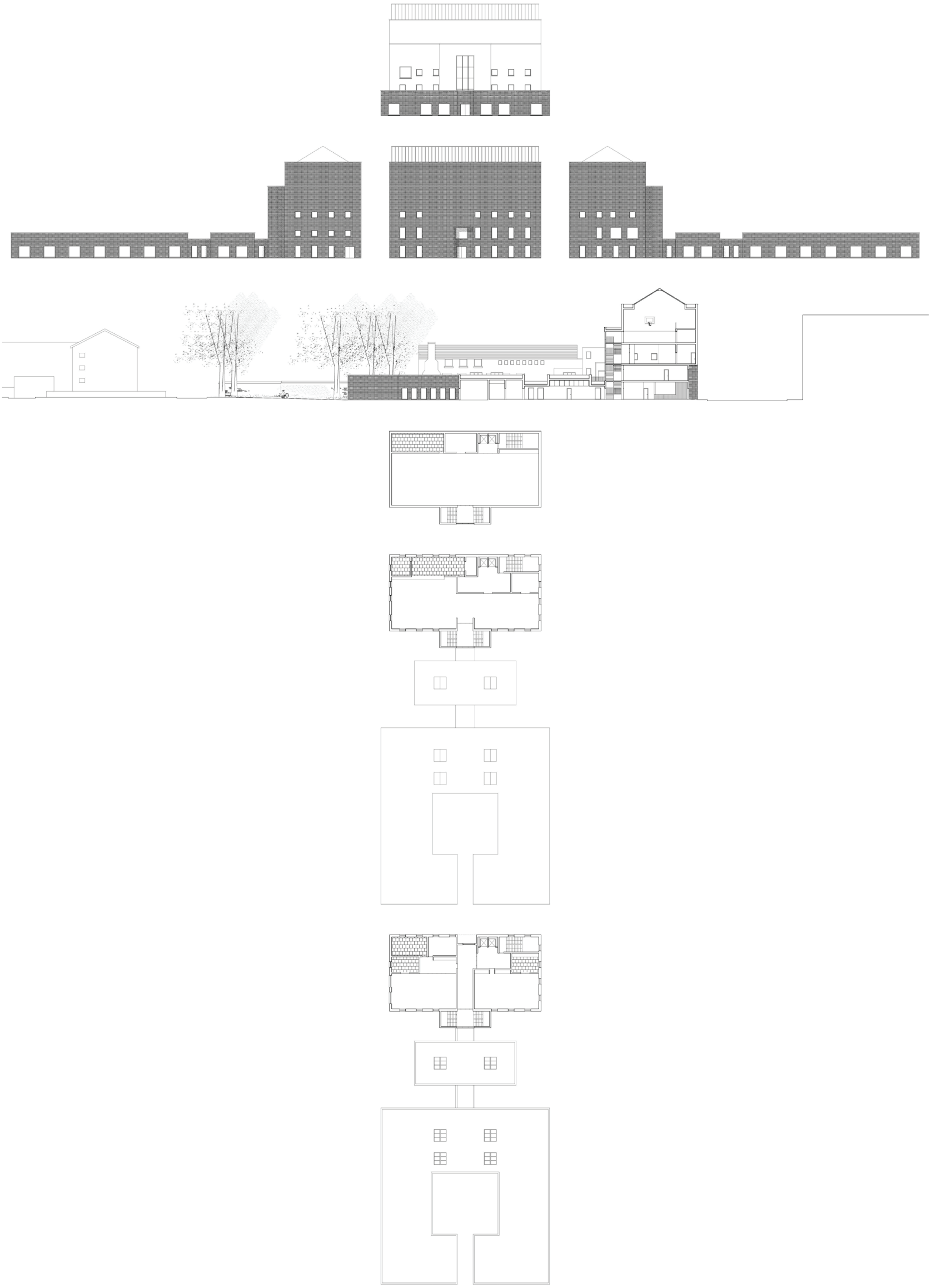






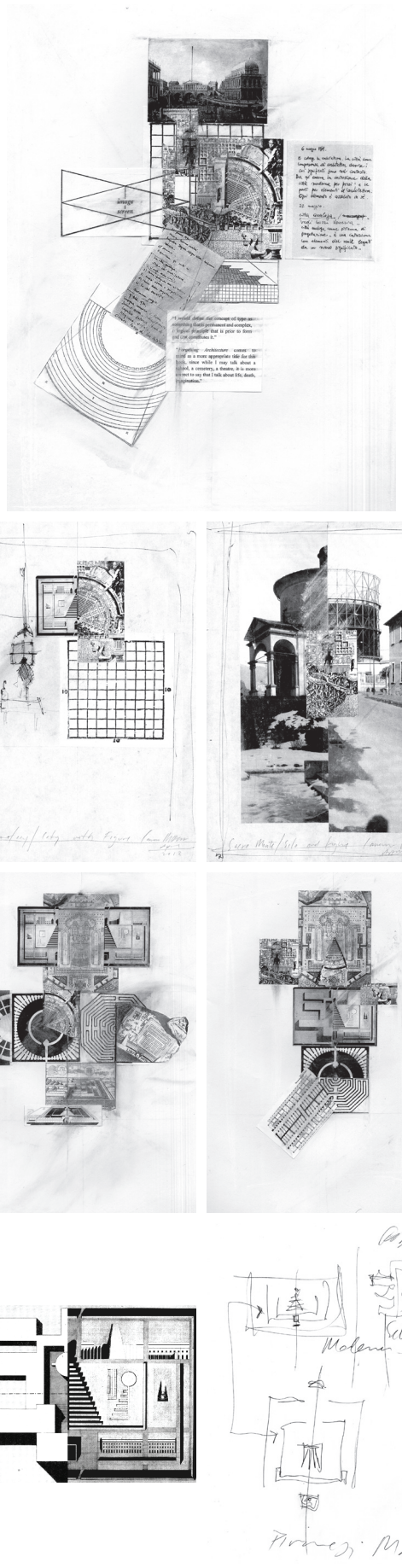
Design for a School in Lochee, January 2013.
Top: site plan. Bottom: montage of elevation with palazzo by Palladio. The project mixes three urban types: a tower-tenement on the street edge, an open courtyard on the playground side, and a pavilion between these. They are connected by a wide corridor. All drawings by author, with plan by Palladio from Four Books, and figure from a found postcard.

URBAN DESIGN; TYPOLOGICAL-CRITICISM; OPERATIVE MONTAGE



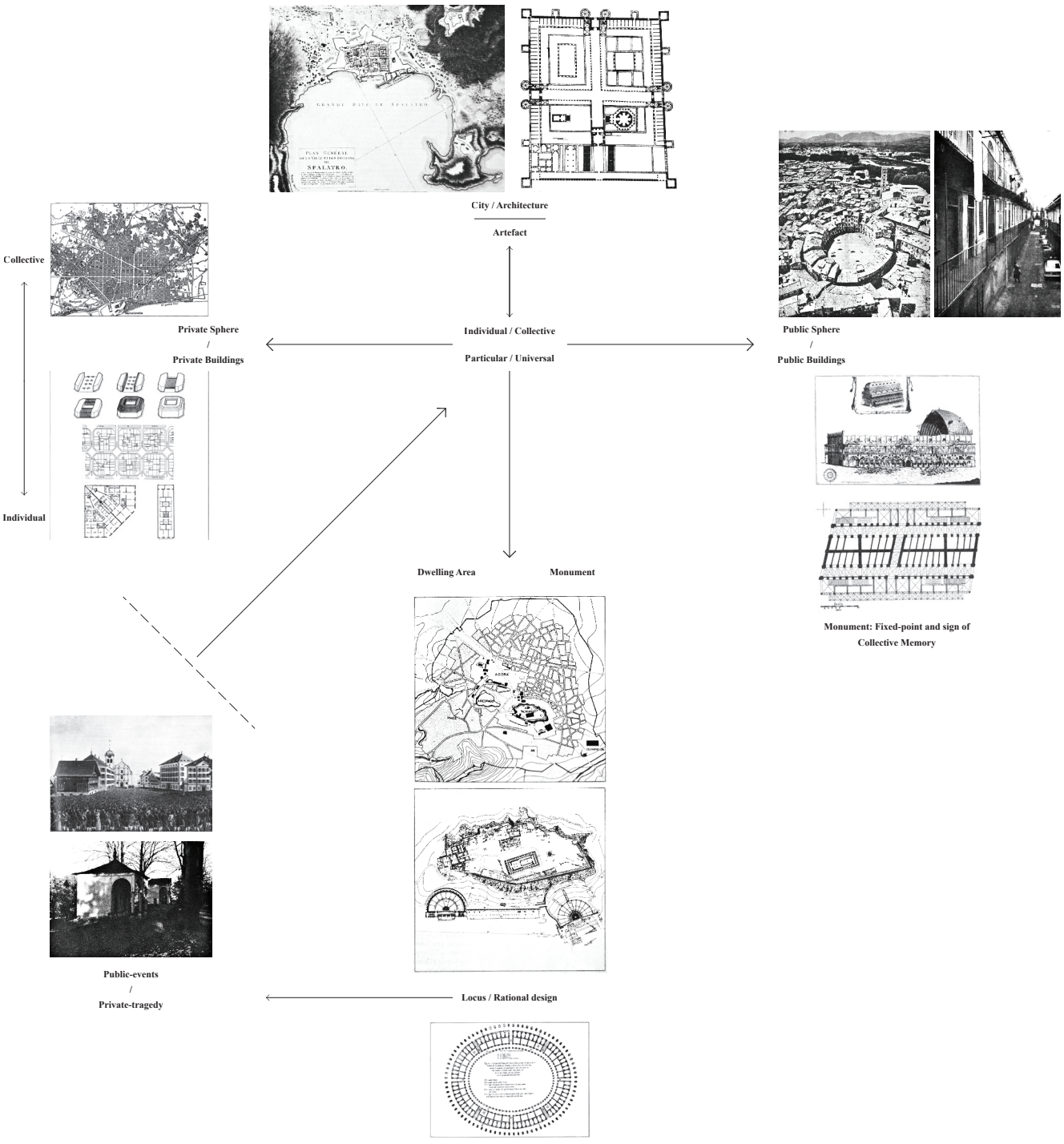
Design for a School in Lochee, January 2013.
Sections, elevations, and floor plans. While the courtyard is for general classrooms, the pavilion at the centre holds an art studio on one side and a library on the other. The tenement-tower on the street edge contains the administration, nursery, dining, gym, and entrance. Drawings by author.

URBAN DESIGN; TYPOLOGICAL-CRITICISM



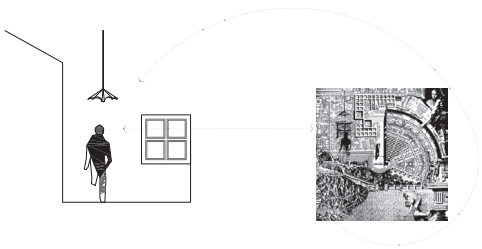
Collage Studies, February - April 2013.
A selection of collages by the author using material including: images by Rossi such as the plan of Fagnano Olona School, the site plan of Modena Cemetery, parts of his Analogical City collage, the Teatro del Mondo, his notebook extracts; photographs from Rossi's work including images from "An Analogical Architecture" such as a silo in a Milan suburb and a chapel of the Sacro Monte; parts of Piranesi's Campo Marzio; plans by Ledoux, Fischer von Erlach, and Serlio's grid; a painting by Canaletto; a diagram from Lacan's Fundamental Concepts of Psychoanalysis; the labyrinth and the Mausoleum of Castel san'Angelo images; plan of the Palazzo della Ragione; and my own drawings of Alberti's San Andrea in Mantua, figures, tables, chairs and lamps after Rossi. At the bottom right is a preliminary study for one of the collages in which Modena Cemetery, Fagnano Olona School, and Piranesi's Campo Marzio are mixed. In each collage, the compositional principle divides the page first in half on the long axis, then into thirds.

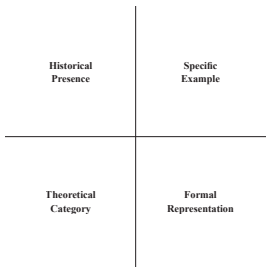
OPERATIVE MONTAGE

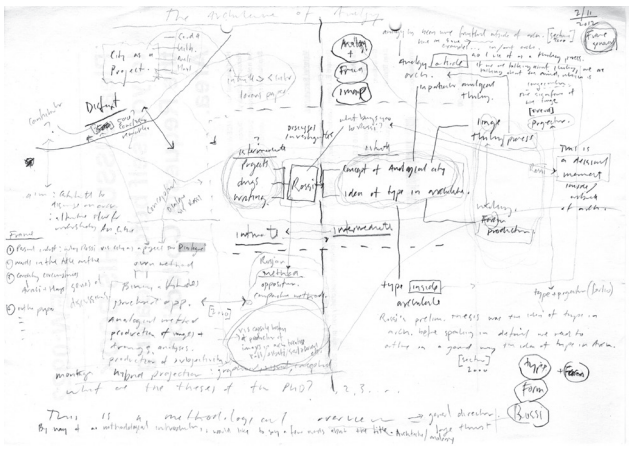


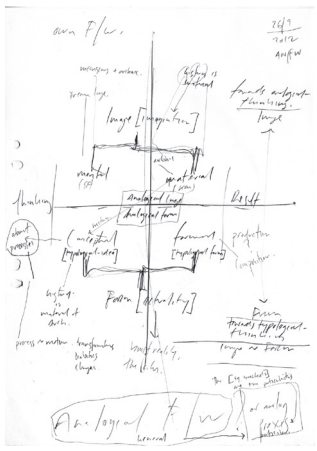
The Architecture of the City Analysis, April and June 2013. *Two more recent analyses of Rossi's The Architecture of the City. Top from April 2013 including images from the American Edition of Rossi's book. The bottom diagram without images, using the specific keywords from Rossi's book, and indicating their relationships. All images from The Architecture of the city, but montaged by the author.*

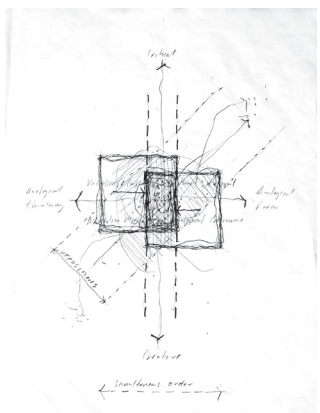
LITERATURE STUDY; ANALYTICAL DE-MONTAGE

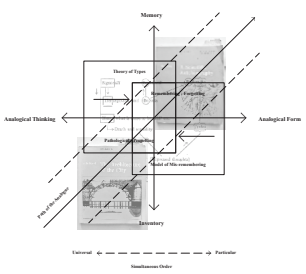


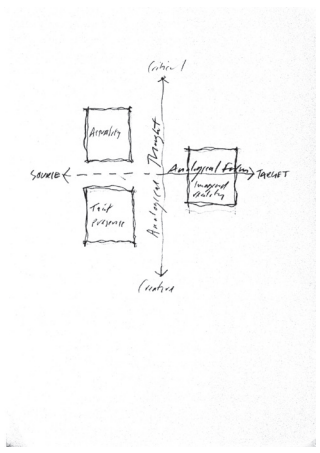


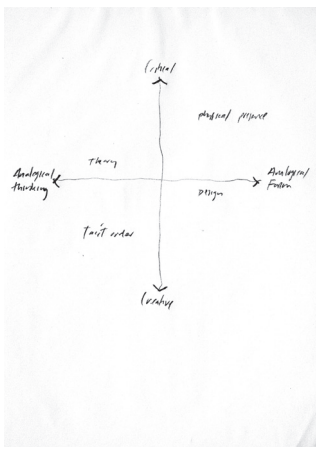


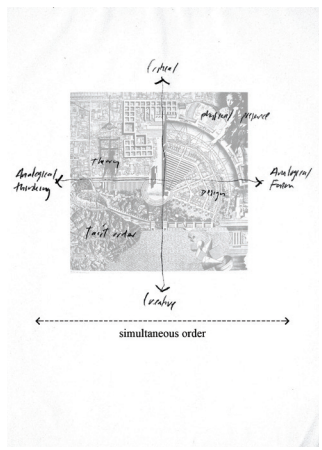












Development of Analogical Framework, September 2010 - June 2013.
The top of the panel indicates thinking about the analogical framework circa June 2013. The drawing on the left brings Rossi's analogical city collage into relation with my own thinking, while the diagram on the right is a general framework of the methodology. The former is referential and the latter is abstract. The combination of the two result in an analogical framework that, at the same time, is particular to this research, and general to further research. The other drawings summarise key moments within the development of this research, starting at the bottom left to right. It is interesting to note the keywords that have framed this research including: critical, creative, unconscious, conscious, universal, particular, distant, intimate, conceptual, formal, material, immaterial. It is also worth noting the superimposing of images: Rossi's analogical city collage, or his books, which indicate the continueds reference points.

OPERATIVE MONTAGE

4.
THE CITY AS AN ARTEFACT
DE-MONTAGE OF THE ARCHITECTURE OF THE CITY

Ultimately, the history of architecture is the material of architecture.

Aldo Rossi, *The Architecture of the City*, 1971.[1]

But throughout its complex historical path, its constitution and definition as a discipline, architecture is identified with the city and cannot be defined without the city.

Aldo Rossi, *The Architecture of the City*, 1971.[2]

Rossi, born in Milan in 1931, spent most of World War II with his family in Lake Como, north of Milan. He enrolled at the Faculty of Architecture at Milano Polytecnico in 1949 then joined the Italian Communist Party (PCI) during the same period. At Milano Politecnico in the 1950s, students were asked to understand the city as a complex totality that encompassed the viewpoints considered as essential elements for a full account of the city including the following: art, literature, philosophy, cinema, sociology, urban geography, politics. Aureli has called this a prototypical moment of interdisciplinary education, and has related this period in the formation of Rossi's thinking to that of neorealist cinema: to document man's life in every dimension of space, time, and place.[3] It is interesting to note at this early stage in Rossi's biography he was exposed to a multitude of themes from heterogenous disciplines and that this reflects the complexity of his thinking which characterises the work of Rossi until his death in 1997.

Fig. 4.1. *Fig. 4.2.*

Tafuri has said that Rossi was the most discussed proponent of the discipline of architecture both in Italy and on the international scene and, "the only 'school leader' capable of constantly fueling around his own works and self a controversy and an interest that ended by affecting the very concept of architecture."[4] In this chapter we will trace some of Rossi's early writings, describe the problems he was dealing with, enumerate the categories that he developed to explain his thinking, and read a selection of his built and unbuilt projects. The main purpose of this chapter is to situate and analyse Rossi's first and primary theoretical text, *L'architettura della città* published in 1966 and translated to English as *The Architecture of the City* in 1982.[5] By doing so we will re-articulate its relational intricacy.

Formal Reduction and Historical Consciousness in Rossi's Early Work

In the ten years between Rossi's enrolment at the Milan Polytecnico and his graduation in 1959 with a project for a centrally planned theatre and cultural centre on Corso Venezia in Milan, he was involved in a number of other intellectual activities. He travelled to Moscow with the PCI in 1951 and has said of the great importance of travel in the education of an architect.[6] He wrote for the magazine *Voce Comunista* and *Società.* The latter published Rossi's first major essay in 1956 on the concept of tradition in Milanese neoclassical architecture.[7]

Fig. 4.3. *Fig. 4.4.*

As Tafuri has said, Rossi searched for the principle elements of architecture and the city. It is important to recognise that Rossi's search was undertaken first through writing. He wrote articles and reviews, in particular during his collaboration with Casabella-*Continuità*, which was edited at that time by Ernesto Rogers, who was a friend of Gropius, Wright and Le Corbusier, as well as the founder of the architectural practice BBPR and was Rossi's professor at Milan Polytecnico. Rogers was attempting to formulate a critique of modernism that rejected both the dismissal of the Modern Movement legacy, and the embrace of the Modern Movement as a sign of technological progress. Instead, Rogers put forward the proposition of "historical continuity," which included Modernism, as well as all that had gone before to link past and present. Rogers articulated this in the modification of the journal title from Casabella, to Casabella-*Continuità*.[8] Rossi contributed to Casabella-*Continuità* on an occasional basis from 1955 until 1958, when he began full-time participation with issue 222. With issue 247 in 1961, Rossi began his co-editorship of the journal, which he retained until his departure with issue 295 in 1964, along with the entire editorial group, including Carlo Aymonino, Guido Canella, Rogers and Silvano Tintori.[9]

Rossi's writing for Casabella-*Continuità* included discussions on Milanese neoclassicism, Enlightenment architecture, problems concerning housing, models of urban analysis, building typology and urban morphology, city analyses of Milan, Berlin and Vienna, and on individual architects including Antonelli, Behrens, Le Corbusier, an extensive analysis of Loos, as well as book reviews. In his essay *Emil Kaufmann e l'architettura dell'Illuminismo* ("*Emil Kaufmann and the architecture of the Enlightenment*") of 1958, Rossi reviewed Emil Kaufmann's book *Architecture in the Age of Reason* published first in English in 1955 then translated to the Italian *L'Architettura dell'Illuminismo* in 1966.[10] It is interesting to note that Wittkower's *Architectural Principles in the Age of Humanism* published in English in 1949, was translated to Italian in 1964 as *Principi architettonici nell'eta dell'Umanesimo*.[11] We can speculate on the significance to Rossi of these historical studies that confront architectural form through the investigation of compositional principles. To get a sense of the scope and heterogeneity of his thinking during this period, we need only cast our eye over the contents list of *Scritti scelti sull'architettura e la città* ("*Selected Writings on architecture and the city*") which collects thirty-four of Rossi's writings between 1956 and 1972.[12] Rossi's writing during this period represents an intense and complex part of his theoretical development.

Fig. 4.5. *Fig. 4.6.* *Fig. 4.7.*

In addition to advancing his thinking through writing, Rossi undertook a series of competition projects in the early 1960s, often in collaboration. Projects for the *Centro Direzionale* in Turin (1962), the monument to the war dead in Cuneo (1962), the Milan Triennale bridge (1964), and the Paganini Theatre in Parma (1964), are notable for their formal reduction to simple geometric volumes such as the cube, rectangular and triangular prisms, and the cylinder, placed adjacently or on top of one another. These projects intentionally questioned two opposing tendencies at that time on how to approach the relationship between city and architecture. On one hand, there was an approach that rejected the city as an historic structure and instead continued the Modern Movement project that rejected history and proposed the cause and effect notion of functionalism where form is the result of a particular function. On the other hand, there was an approach that put forward a stylistic mimesis of the historic city through its imagery and exemplified in Rogers and BBPRs Torre Velasca tower (1956-58), sited on a bombed-out block close to the Duomo in central Milan. The lower ten floors contained offices with apartments above, in an attempt to redress the trend in downtown areas of increased businesses but decreased residential density. The oblique concrete columns were supposed to recall the Gothic buttresses of the Duomo and mimic the image of the historic city. The former position is exemplified by Kenzo Tange's theoretical project for Tokyo Bay (1959-60), which Tafuri brought to an Italian audience through his writing on modern Japanese architecture, and which had been presented, along with the Torre Velasca tower by Rogers, at the CIAM final meeting in Otterlo in 1959.[13] The Tokyo Bay project proposed a linear alternative to the radial structure of the city by using the bay of Tokyo. An axially organised system of ringed highways crossed the bay, and floating residential units were arranged off the central axis to aggregate outward. According to Tange, the proposal would house ten million

Fig. 4.8. *Fig. 4.9.* *Fig. 4.10.* *Fig. 4.11.*

1. Aldo Rossi, 'Introduction to the Portuguese Edition of The Architecture of the City' (1971), in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), 169–177 (p. 170).

2. Rossi, 'Introduction to the Portuguese Edition of The Architecture of the City' (1971), in *The Architecture of the City*, p. 170.

3. Pier Vittorio Aureli, 'The Difficult Whole: Typology and the Singularity of the Urban Event in Aldo Rossi's Early Theoretical Work, 1953-1964', *Log*, ed. by Cynthia Davidson, 9 Winter/Spring (2007), 39–61 (p. 41).

4. Manfredo Tafuri, *History of Italian Architecture, 1944-1985*, trans. by Jessica Levine (Cambridge, Mass.: MIT Press, 1989), p. 135. First published in Italy, 1986.

5. Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982). Originally published in Italy by Marsilio under the title *L'architettura della città*, 1966.

6. Aldo Rossi, 'Autobiographical Notes on My Training, Etc. December 1971', in *Aldo Rossi: The Life and Works of an Architect*, trans. by Laura Davey (Köln: Könemann, 2001), 23–25 (p. 24).

7. For a good biographical overview of Rossi see the 'Biography' section (pp. 285-288) of Chiara Spangaro, 'Appendix', in *Aldo Rossi: Drawings*, ed. by Germano Celant, trans. by Paul Metcalfe (Milan: Skira, 2008), pp. 275–302.

8. See Adrian Forty, *Words and Buildings: A Vocabulary of Modern Architecture* (London: Thames & Hudson, 2012). First published 2000. The sections on 'Context' (pp. 132-135) and 'Type' (pp. 304-311) are relevant.

9. Carlo Olmo, 'Across the Texts: The Writings of Aldo Rossi', *Assemblage*, 1988, 91–121 (p. 92).

10. Aldo Rossi, 'Emil Kaufmann e l'architettura dell'illuminismo' (1958), in *Scritti scelti sull'architettura e la città 1956-1972* (Milan: Abitare, 2012), pp. 57–66. Emil Kaufmann, *Architecture in the Age of Reason: Baroque and Post-Baroque in England, Italy, and France* (Hamden, Connecticut: Archon, 1966). First published 1955.

11. Rudolf Wittkower, *Architectural Principles in the Age of Humanism* (London: Academy Editions, 1973). First published in 1949.

12. Aldo Rossi, *Scritti scelti sull'architettura e la città 1956-1972* (Milan: Abitare, 2012). This is an important collection of essays and is unfortunately still unavailable in an English translation.

13. Manfredo Tafuri and Francesco Dal Co, *Modern Architecture Vol. 2*, trans. by Robert Erich Wolf (London: Faber & Faber/Electa, 1986), pp. 357-360. Also see Oswald Mathias Ungers and Heinrich Klotz, 'Excerpts from a Dialogue Between Heinrich Klotz and O.M. Ungers (1977)', in *Works in Progress 1976-1980*, trans. by Jane O. Newman and John H. Smith (New York: IAUS and Rizzoli, 1981), pp. 20-23.

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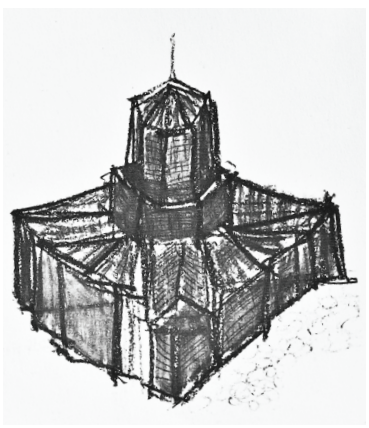

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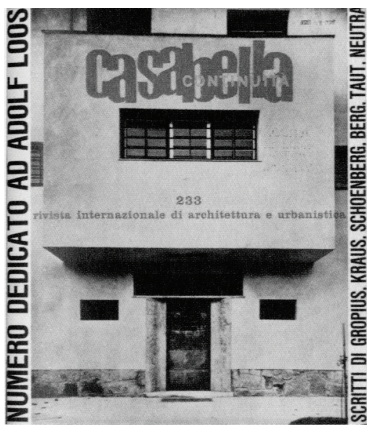

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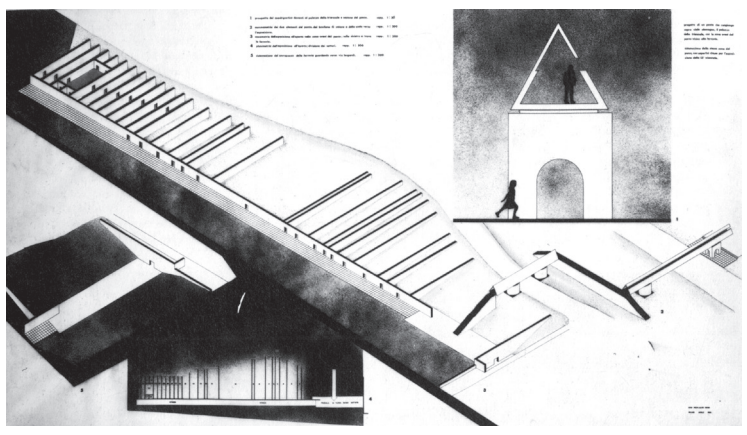

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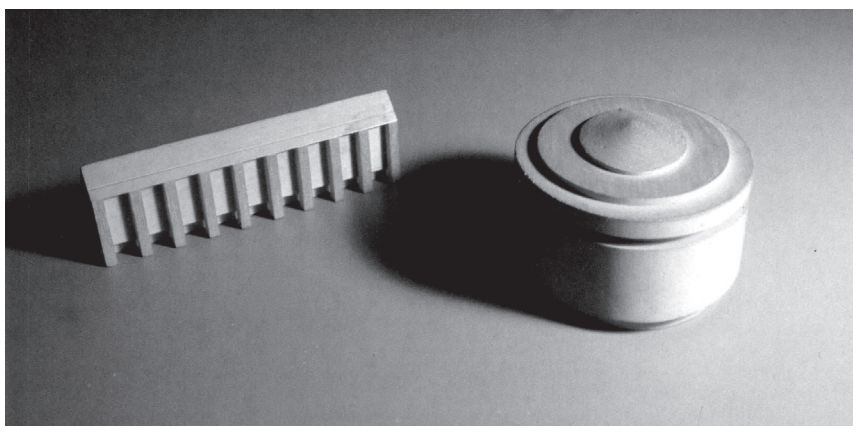

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4.1-4.2. The San Carlone in Arona and a Sacri Monti chapel, from Rossi's A Scientific Autobiography.
4.3. Rossi's sketch study of his student project for a centrally planned Cultural Centre and Theatre in Milan, 1959.
4.4. Aldo Rossi, photograph of Kremlin Square, Moscow, 1951.
4.5. Rossi's photograph of a city periphery in his article La città e la periferia for Casabella-Continuità, 1961.
4.6. Rossi edited a special issue of Casabella-Continuità on Adolf Loos in 1959, when Loos was still considered a secondary figure of the Modern Movement.
4.7. Another special issue of Casabella-Continuità devoted to young Italian architects in 1963. Rossi's drawing for a Monument to the Partisans in Cuneo (1962) illustrates the cover.
4.8. Rossi and Luca Meda, Iron Bridge and Park Exhibition for Milan Triennale, 1964.
4.9. Rossi, Pilotta Square and Paganini Theatre in Parma, 1964. Photograph of scale model showing formally reduced geometric volumes.

people and bring city structure, transport and urban architecture into "organic unity." It would result in, "a new urban spatial order which will reflect the open organisation and the spontaneous mobility of contemporary society."[14] Both the megastructure and historical imagery became recurrent themes in 1960s debate, and both tendencies were countered by Rossi. A typical example of his critique during this period is the *Centro Direzionale* project in Turin, which is amongst Rossi's first works.[15]

As has been said, the economic and social transformation of postwar Italy gave rise to rapid urbanisation as cities extended from the periphery outward. Architects viewed this as an opportunity to speculate on the potential for new urban strategies that would enable a transition toward a fairer society. However, as Paul Ginsborg has explained, the economic prosperity of the 1960s, evolved towards a consumerist society. What marked this period in Italy was the notion of *la nuova dimensione*, the "new dimension." It was the optimistic belief that positive changes in social and economic realms would come from within the process of capitalist development. This view of urban dynamics coincided with political debate on the will to advance capitalism through council and business administration. In May 1962, a competition was held for a central business district in Turin, termed *centro direzionale*. It marks a societal transformation in Italy from industrial production, to a consumerist ethos and a service industry.[16] Architects and planners thus found in the *centro direzionale* an urban structure to support the economic and administrative forms of affluent society. The competition brief stated that the Turin *centro direzionale* should advance the economic prospects of the city by linking it to the wider region, and a future European economy.[17]

Of the twenty or so entries, first prize was awarded to a proposal by a team led by Ludovico Quaroni who zoned the site and placed at the centre fourteen towers, each 125 metres in height. Incidentally this is around the same height as the Torre Velasca tower mentioned before. Second prize went to a proposal that organised the building into a series of horizontal terraces rising to one enormous slab. By contrast to both, Rossi proposed a closed 100 x 100 metre hollow cube.

Fig. 4.12.
Fig. 4.13.
Fig. 4.14.

In his *Centro Direzionale* project Rossi intentionally opposes the extendable megastructure of Tange, the complexity of Quaroni, the imagery of Rogers, and the diagrams of Tafuri, who at this time had cofounded an architecture and planning studio named AUA.[18] Although none of these proposals for the Turin *centro direzionale* were built – the winning scheme was abandoned in 1970 – they have become important precedents in the history of postwar Italian architecture and urbanism. Rossi argued that the megastructure was an "open-form" concept which was not conditioned by the material reality of the city, but by the economic and sociological analyses put forward by planners and politicians who were inclined toward a "diagrammatic attitude." Instead, Rossi appealed to the concreteness of architectural form and said, "Only a defined and finite form, by virtue of its clear limits, allows for its continuity, and for the production of further actions and the adaptation to unpredictable events."[19] It can be said that projects such as those by Tange, Quaroni, and Tafuri, provoked Rossi to formalise the idea of type, with its potential for formal clarity and historical consciousness as an alternative to the vagueness of urban planning and the rejection of history.[20]

Fig. 4.22.

Concurrently, Rossi was commissioned by the *Lombardo per gli Studi Economici e Sociali* ("*Lombard Institute for Social and Economic Studies*") to report on Milanese tenement buildings.[21] A report he published in 1964 entitled *"Contributo al problema dei rapporti tra tipologia edilizia e morfologia urbana"* ("Contributions to the problem of the relationship of building typology and urban morphology").[22] It indicates a shift in emphasis in Rossi's writing which to this point had considered the wider city and its history in a more general sense. Now, Rossi began to theorise the idea of type, later culminating in *The Architecture of the City*.

Fig. 4.15.

We can situate Rossi's ideas on the interrelated concepts of type, city, urban form, memory and history in the 1956 "The Concept of Tradition in the Neoclassical Architecture of Milan." It is here that Rossi proposes architecture as a problem of historical knowledge, writing that it is through the, "rational criticism of what was done, that gives rise to something else, larger, and new."[23] Furthermore, Rossi writes that certain urban types like monuments, piazza's, and streets are the, "witness of civil history," and become constituent elements that reflect the history and formation of the city and society. Rossi cites the Napoleonic plan for Milan, dating from an 1807 Act. A city plan was drawn up for the improvement of building fronts, the enlarging of piazza's, the straightening of streets, and the construction of a new business centre. The latter was Antolini's project for the Bonaparte Forum. Due to social, political and economic factors the Bonaparte Forum was not built, but almost eighty years later in 1884 and under different circumstances, the plan was recalled by the engineer Beruto. The autonomy of Antolini's design, and the plan configuration of Milan itself seems encapsulated in the circular forum. In Beruto's plan the physical form of Antolini's Forum is recalled once more but not with the purpose of a business forum, but to organise circulation around the castle. The singularity of a past architectural form, although unbuilt, is retained within the collective imagination of the city.

The years after Rossi's studies of Milan, he held a number of academic and research posts including: in Arezzo teaching planning with Quaroni until 1964; then in Milan between 1965 and 1970; and also in Venice. During Rossi's research post in Venice, under the supervision of Carlo Aymonino, Rossi wrote several essays on typology as lecture notes and turned them into booklets. They included the following: "Considerations on the relationship between urban morphology and building typology" (1964), "Typological problems of housing" (1964), "Methodological problems of urban research" (1965), "Typology, manuals, and architecture" (1966), "The city as foundation for the study of the character of buildings" (1966).[24] Aureli has noted Rossi's insistence on the word "problem" in the title of these essays. For Aureli, this indicates that Rossi was problematising the city, but not in terms of a problem to solve, but in a way that could initiate a discussion. Thus Rossi accepts the city as it exists and develops a position on architecture as a concrete unit of the city inseparable from life and society: an urban artefact. While in Venice, Rossi taught alongside Saverio Muratori, whom made studies of the urban morphology of Venice. Aureli raises an interesting statement by Muratori as the latter writes on type:

Fig. 4.16.
Fig. 4.17.

> ... we need to embrace the whole reality of a building as a manifestation of a collective formal intuition - i.e., as types - which contribute to a particular architectural environment. This means we have to conceive of individual architectural expressions in all of their phases of development, each of which adopts a previous form and includes it as an integral part in a new and more elaborate structure able to encompass and express a whole history and tradition.[25]

Muratori raises the significance of history and tradition inherent to the idea of type, and how inherent to the production of new work is always the connection to previous work through formal transformation. We can recall that Rossi had started his theoretical production with a work on tradition, and understanding architectural production as a totality of all architecture. It is crucial to note that Muratori also says "formal intuition" suggesting the significance of the architect's own imagination. Yet, by emphasising the collective, Muratori insists on imagination as more than the individual.

In Rossi's "The Concept of Tradition in Milanese Classicism," he studied the concept of tradition as it relates to architectural form.[26] Rossi considered tradition to be the free choice of what history offered. What exists is accepted, from which, we derive, "a wider, newer order through rational

14. Kenzo Tange, 'A Plan for Tokyo, 1960: Toward a Structural Reorganisation', in *Architecture Culture 1943-1968: A Documentary Anthology* (New York: Rizzoli, 1993), 325–334 (p. 330). At that time Tokyo had a population of ten million, so Tange looked to double this in a single project.

15. See Brett Steele and Francisco González de Canales, eds., *First Works: Emerging Architectural Experimentation of the 1960s and 1970s* (London: Architectural Association, 2009), pp. 78-89.

16. See: Mary Louise Lobsinger, 'The New Urban Scale in Italy: On Aldo Rossi's L'architettura Della Città', *Journal of Architectural Education*, 2006, 28–38; Mary Louise Lobsinger, 'Architectural Utopias and *La Nuova Dimensione*: Turin in the 1960s', in *Italian Cityscapes: Culture and Urban Change in Contemporary Italy*, ed. by Robert Lumley and John Foot (Exeter, UK: University of Exeter Press, 2004), pp. 77–89; Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013), first published in 2008. For further context, see Ginsborg, *A History of Contemporary Italy*, pp. 210-253.

17. Lobsinger, 'Architectural Utopias and *La Nuova Dimensione*', p. 83.

18. Tafuri, who was an early proponent of *Nuova Dimensione*, co-founded AUA (Architetti Urbanisti Associati) in 1961, with Vieri Quilici and Giorgio Piccinato. An architectural and urban planning practice based in Rome, AUA introduced the concept of "city-territory," which searched for a new scale of urbanism that absorbed the openness of new geographic, economic, and political structures. Although the group continued for some time, Tafuri left in 1964.

19. The quote is by Rossi via Aureli, 'The Difficult Whole', p. 54.

20. Aureli, 'The Difficult Whole', p. 53.

21. See Spangaro, 'Appendix', in *Aldo Rossi: Drawings*, p. 285.

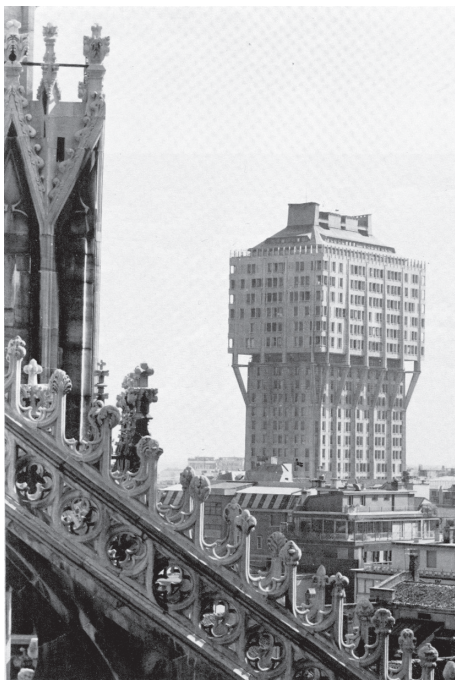
22. Rossi, *Scritti scelti sull'architettura e la città*, pp. 235-242

23. Rossi, "Il concetto di tradizione nella architettura neoclassica milanese", in *Scritti scelti sull'architettura e la città*, p. 12.

24. These can be found in Rossi, *Scritti scelti sull'architettura e la città.* However, only the latter has been translated into English and can be found in Aldo Rossi, *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan (London: Architectural Design, 1983), pp. 26-33, under the slightly different title *The City as the Basis for the Study of the Characters of Buildings.*

25. The quote is by Muratori via Aureli, 'The Difficult Whole', p. 56.

26. Rossi, "Il concetto di tradizione nella architettura neoclassica milanese", in *Scritti scelti sull'architettura e la città*, pp. 3-24.



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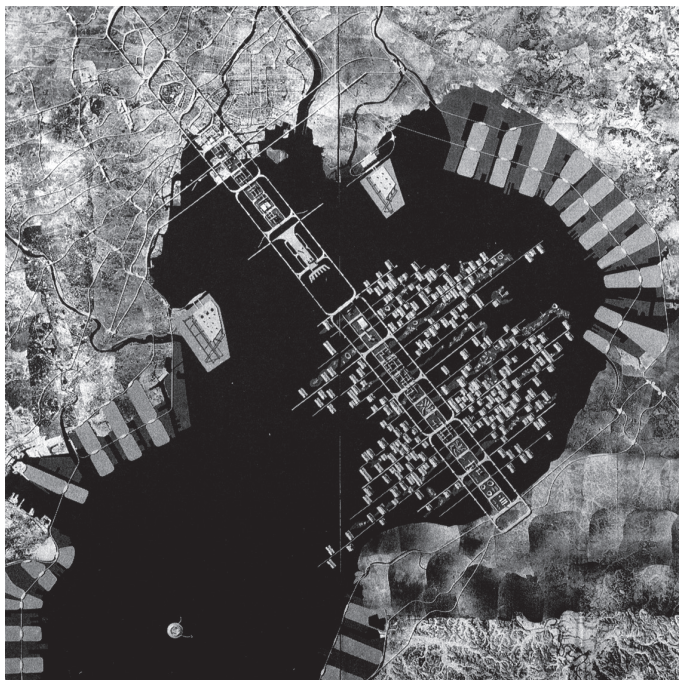

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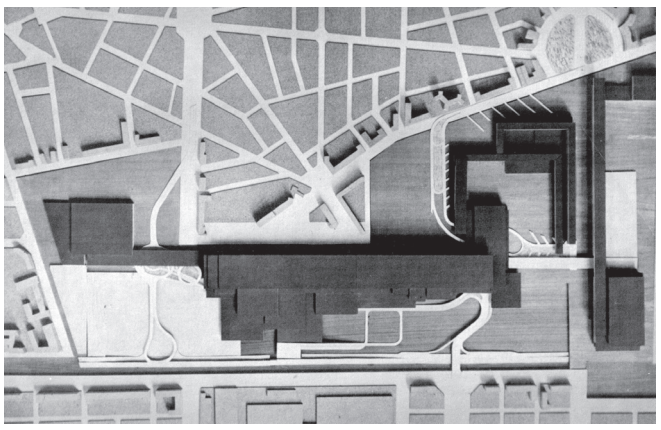

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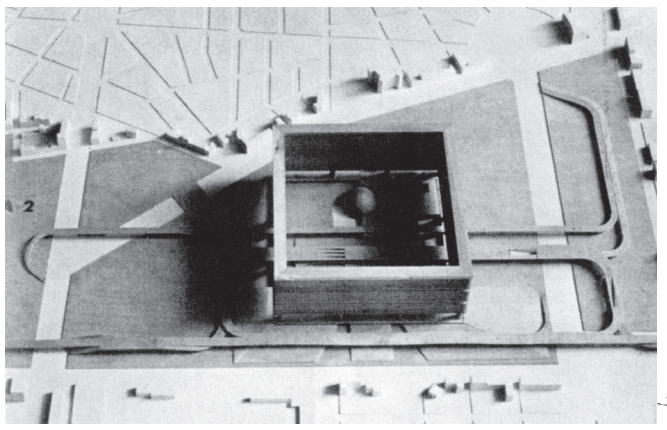

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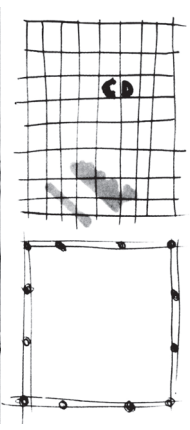

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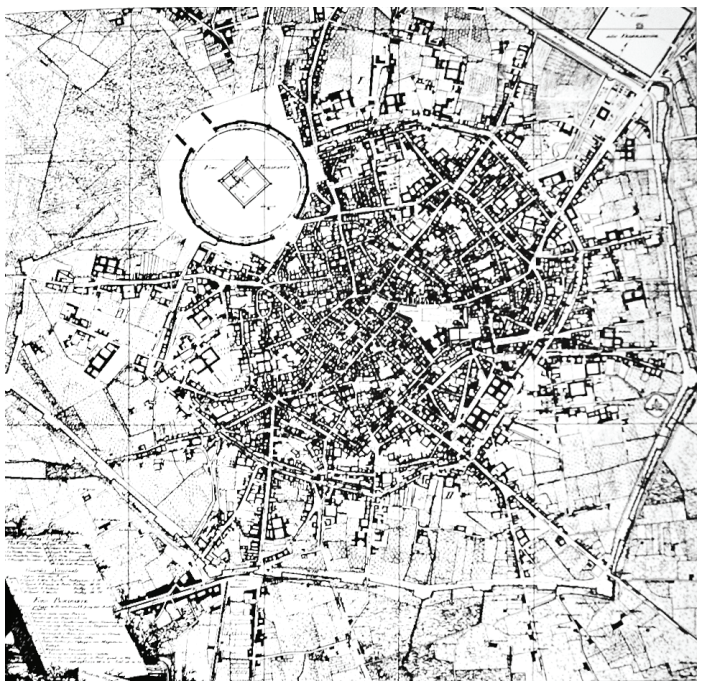

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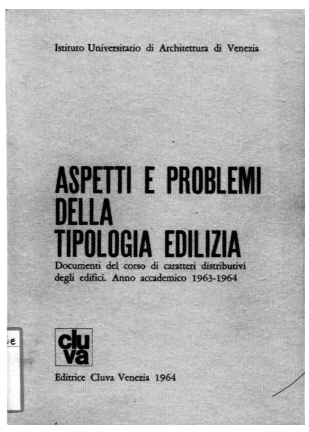

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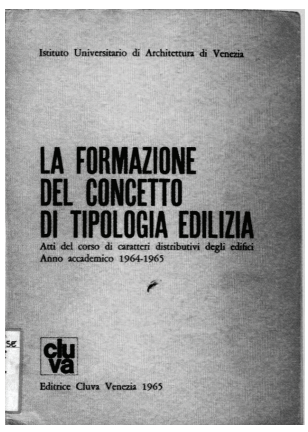

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4.10. BBPR, Torre Velasca, 1956-58. View from Milan Duomo. The project evokes a notion of history through a quasi-medieval aesthetic.
4.11. Kenzo Tange, Project for expansion of Tokyo over its harbour, 1960. Takes the form of an extendable megastructure.
4.12. Samonà, Dardi, et al., Project for Turin Centro Direzionale (CD). Horizontal cascade of Second Prize submission.
4.13. Rossi, Meda, and Polesello, Locomotiva 2, 1962. Monumental, austere and closed in form, in opposition to the prevalent theories for "open-form" in the 1960s.
4.14. Rossi's sketch showing the Roman grid of Turin above the plan of his CD proposal. The project, although on the periphery of the city is analogically related to Turin, as a unit of the city grid.
4.15. Plan of Milan, 1801. Antolini's Bonaparte Forum in top left seems to encapsulate the idea of Milan in a singular form.
4.16-4.17. Rossi, Course booklets for his IUAV lectures on typology, 1963-65.

criticism of what had previously been done."[27] The rational criticism can also be considered a critical apparatus, out of which the shared principle of type is extrapolated. A principle which originates with the city out of a character of necessity, and grows with a will to aesthetic expression. In another essay, "Architecture and City: Past and Present" Rossi considered the tension of the relationship between old and new, between the totality of architecture and the singularity of a moment in history:

> In reality, architecture is formed with all its history; it grows with its own justifications and only through this process of formation does it fit into the built or natural world which surrounds it. It works when, through its own originality, it establishes a dialectical relationship; then it shapes a situation.[28]

We can compare this statement to one by Eliot – a reference of Rogers – who has said the following on the historical consciousness and the dialectical nature of past and present:

> The existing monuments form an ideal order among themselves, which is modified by the introduction of the new (the really new) work of art among them. The existing order is complete before the new work arrives; for order to persist after the supervention of novelty, the *whole* existing order must be, if ever so slightly, altered; and so the relations, proportions, values of each work of art toward the whole are readjusted; ... The past should be altered by the present as much as the present is directed by the past.[29]

Historical consciousness is something obtained by great labour. Eliot is writing about literature and that the poet must write not only with his own generation in mind, but with the whole of the literature since Homer, and the whole literature of his own country composing a "simultaneous order" between all that is past and all that is present. The same applies to architecture and we can transcribe this to Rossi's evolving thinking on type. Type establishes a dialectical relationship with all that has gone before, and is encapsulated in the singularity of architectural form, which in turn transforms both past and present.

Carlo Olmo has said that it was in the articles Rossi wrote for Rogers' Casabella-*Continuità* that Rossi was attempting to interpret the Modern Movement legacy within a framework that related to the category of tradition. For example in separate articles on Perret and Ridolfi, Rossi was investigating in what way tradition is manifest in architectural language. This led to the related problem of understanding historical knowledge in architecture and toward the theme of autonomy as a disciplinary question. Rossi acknowledged the disciplinary theme as the relationship between architecture and society.[30] He held the view that architecture, as a product of culture analysed by others outside of the discipline of architecture, is to understand architecture as a reflection of society. Viewing architecture in this way, we can understand the generative capacity of architecture to produce the city, and to contribute to understanding the ethos of a people. Inherent in this idea of historical consciousness is first an understanding of tradition as it relates to the analysis of the city and society, and second for history as a generating principle in the creative process of architecture.

In Eisenman's Introduction to the English translation of *The Architecture of the City*, he writes that Rossi's critique began as a critique of the city of modern architecture. Rossi did not reject the Modern Movement outright, but was critical of the focus on understanding the city as circulation, the functionalist approach of zoning, and the cause and effect strategy which equated function and form. By explaining that the form of the city was a complete expression of architecture, Rossi believed the principles of architecture are found in the city, so the history of the city is also the history of architecture, and that cannot be understood from a purely functional point of view.[31] Yet, Rossi has sympathy toward the Modern Movement project because the masters of that period also confronted the problem of the city, and of history. Together with formal expression, there is an affinity between Rossi's focus on the city and the Modern Movement discussion on the city, even though the theory is radically different.

If we consider what we have said on historical consciousness, on the relationship between past and present, and on our brief mention to the Modern Movement we can think of Rossi's unbuilt project for a residential block in the San Rocco district of Monza, in the industrial suburbs of Milan (1966). The plan layout of the grid is simply extruded to become major and minor courtyards within larger block plans which are shifted off axis and in its simple extrusion there is an extreme formal reduction. Yet, the plan refers to the ancient Roman gridded city, and Rossi referenced monastery cloisters as well as, "the great houses of the Modern Movement in Berlin and Vienna."[32] We can think of the Karl Marx-Hof in Vienna (1927). These are references that look to the history of architecture both ancient and modern, so that although what we see is formal reduction, the process undertaken to arrive at expression, is complex, dialectical, and historical. San Rocco was designed on the eve of the publication of *The Architecture of the City*. Let us turn now to Rossi's first book.

Fig. 4.18.
Fig. 4.19.
Fig. 4.20.
Fig. 4.21.

Situating The Architecture of the City

While teaching at Milan, Rossi published *The Architecture of the City* in 1966. Like a literary montage, it attempted to synthesise the ideas that Rossi had been writing about in articles for Casabella, other journals, and his lecture notes from Venice. We find a vast array of references from a variety of disciplines. Discussions on the theory of type are extrapolated from Enlightenment architects such as Milizia, Durand and de Quincy, there are analyses of urban geographers such as Poète on the idea of permanence, intertwined with analyses on sociologist Halbwachs' concept of collective memory, as well as Halbwachs' work on economics, Marx on urban history, Baudelaire's verse, case studies on cities such as Cerdà's urbanisation of Barcelona, the transformation of Paris by Haussmann, and housing in Berlin.

Let us now make a few remarks on Rossi's choice of *The Architecture of the City* as a title for his book. We have already said that Rossi rejected the diagrammatic planning of AUA, and instead was interested in the formal dimension of architecture and the city. Kevin Lynch, whom Rossi cites briefly, but favourably in *The Architecture of the City*, published the book *The Image of the City* in 1960 with MIT Press, which was then translated into Italian in 1965 by the Paduan publishing house Marsilio.[33] Rossi had undertaken a study of Berlin housing in 1964, and had known Hilberseimer's 1927 book *Groszstadt Architektur*, which was translated into Italian as *L'architettura della grande città*, which is "*The Architecture of the Big City*."[34] Hilberseimer's book analysed the form of the metropolis made up of urban types such as "Residential Buildings" and "High-rises," within a framework that spanned the history of the city and its development. By contrast, Lynch studied the perceptual and psychological aspects of the city, visualised in plan diagrams delineating the following: paths, edges, nodes, districts and landmarks, and all as either "major," or "minor." In Lynch's book there is no discussion of the historical form of the city, instead Lynch looks to the "image" of the city, one "that everyone knows" arrived at by a sociological study.[35] Rossi follows Hilberseimer's formal urban types, and describes the final constructed representation of the experience of the city as "architecture," and so reflects this in the title of his book, thus replacing Lynch's "image."

Fig. 4.23.
Fig. 4.24.
Fig. 4.25.
Fig. 4.26.

A vast body of literature exists on and around Rossi's book, and we can outline some pertinent comments to provide context.[36] Lobsinger has said that *The Architecture of the City* demarcated the conclusion to a wide ranging debate in Italy about the form, history and future of the city. She reminds us of a number of Italian reviews of *The Architecture of the City* which acknowledged Rossi's intention to formulate "principles to understand the city."[37] Reviews such as that by Grassi welcomed the relationship between history, city form, and politics. He reinforced Rossi's rejection of a purely functionalist reading of the city,

27. Rossi, *Scritti scelti sull'architettura e la città*, p. 11.

28. Aldo Rossi, 'Architecture and City: Past and Present' (1972), in *Aldo Rossi: Selected Writings and Projects*, ed. by J O'Regan, trans. by Judith Landry (London: Architectural Design, 1983), 48–53 (p. 49).

29. Thomas S. Eliot, 'Tradition and the Individual Talent' (1917), in *The Sacred Wood and Major Early Essays* (Mineola, New York: Dover Publications, 1998), 27–33 (p. 28).

30. Rossi, 'Il concetto di tradizione nella architettura neoclassica milanese' (1956), in *Scritti scelti sull'architettura e la città*, pp. 3-24. Can be translated as, "The concept of tradition in Milanese Neoclassical architecture."

31. Rossi, *The Architecture of the City*, p. 114.

32. Aldo Rossi, *Aldo Rossi: The Life and Works of an Architect*, ed. by Alberto Ferlenga, trans. by Laura Davey (Köln: Könemann, 2001), p. 40.

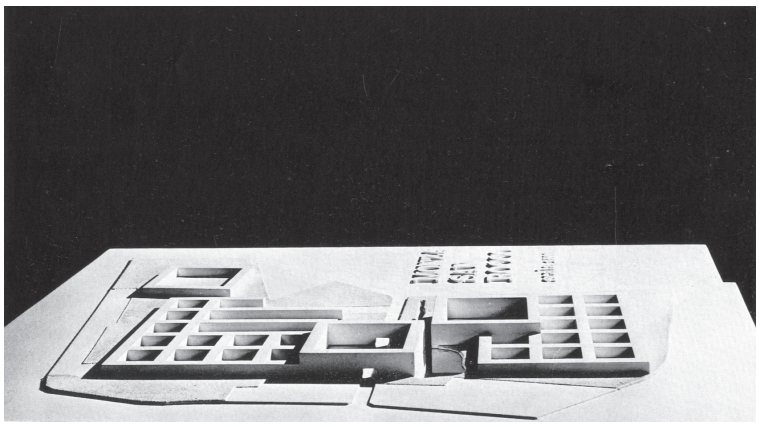
33. Kevin Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 1960). For a brief discussion of Marsilio, see Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013), p. 87. Marsilio was founded by Toni Negri and Paolo Ceccarelli in 1961, and according to Aureli, to address Italy's industrial transformation, providing theoretical frameworks for its critical interpretation.

34. See Rossi, 'Aspetti della tipologia residenziale a Berlino' in *Scritti scelti sull'architettura e la città*, pp. 221-234. On Hilberseimer, *Groszstadt Arkitektur* of 1927 has a new English translation entitled *Metropolisarchitecture*. See Ludwig Hilberseimer, *Metropolisarchitecture and Selected Essays*, ed. by Richard Anderson, trans. by Julie Dawson and Richard Anderson (New York: GSAPP, 2012).

35. See for example Lynch, *The Image of the City*, pp. 18-21.

36. Aureli, Chupin, Hays, Martin, and Vidler, have all to varying extents, cited *The Architecture of the City* in their recent books. See bibliography for full details. The book was also the subject of the International Conference "The architecture of the city" at Università Iuav di Venezia between the 26th to 28th of October 2011.

37. Lobsinger, 'The New Urban Scale in Italy', pp. 35-36.



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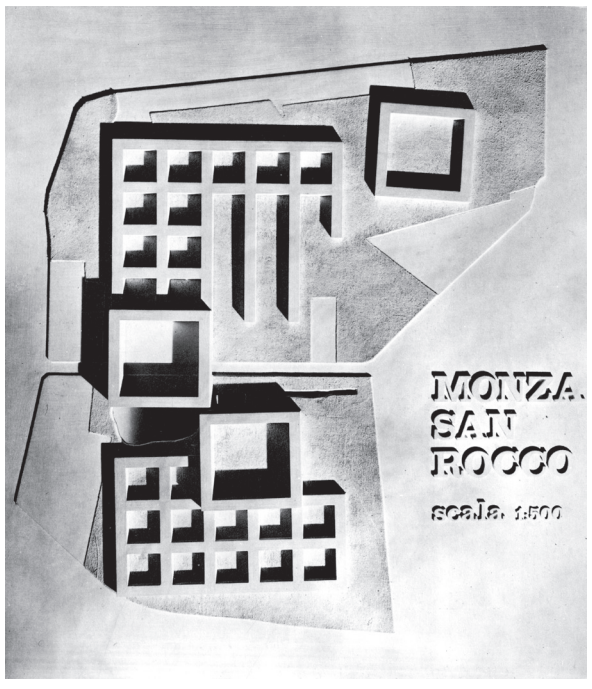

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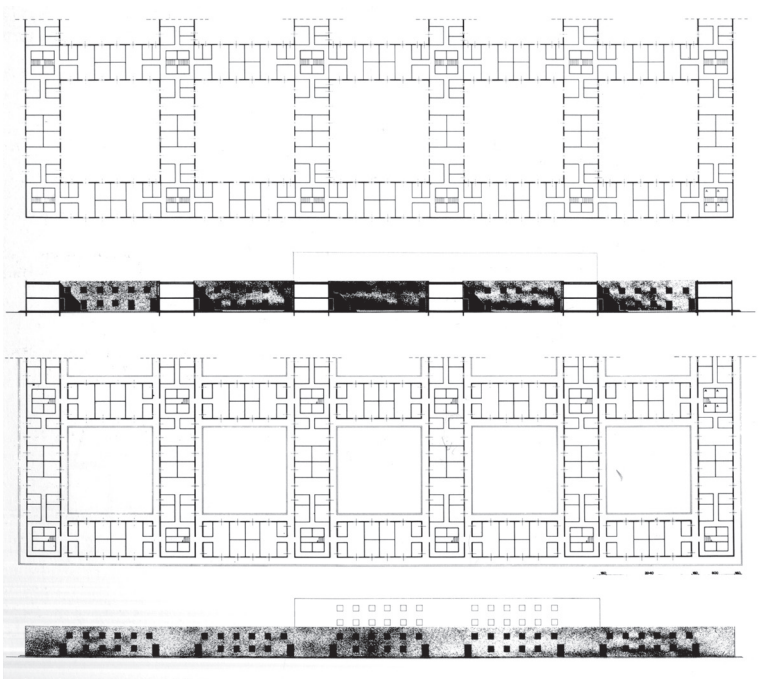

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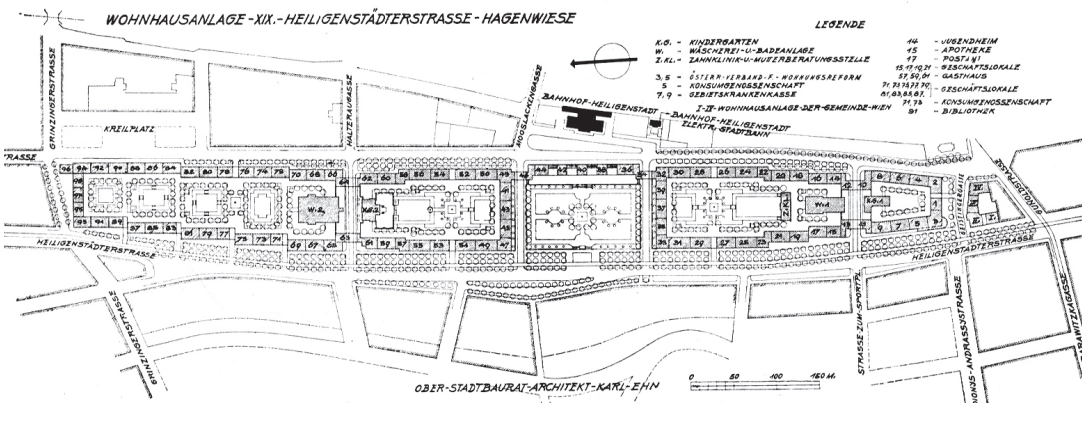

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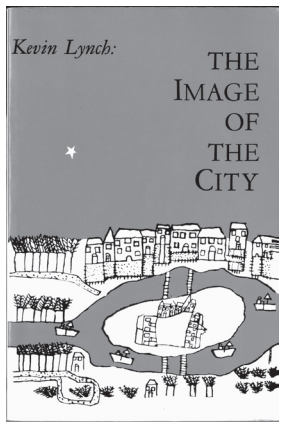

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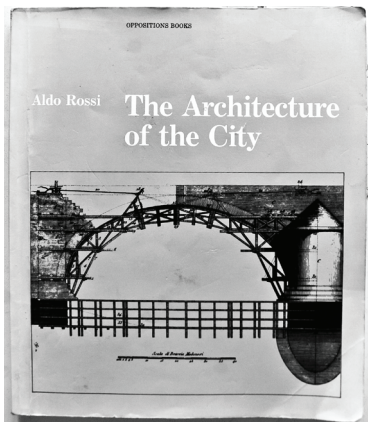


4.26.

4.18-4.19. Rossi and Grassi, San Rocco Housing, 1966. Views of scale model. The grid is extruded to form two and four storey, small and large courtyards.
4.20. Part floor plans with section and elevation.
4.21. Karl Ehn, Plan of Karl Marx-Hof in Vienna, 1927. A housing complex that included nurseries, laundries, a library, offices, shops, health clinic, and green areas. Rossi included the plan in his article Due Progetti in Lotus 7 on his housing complexes for San Rocco and Gallaratese.
4.20. AUA, Diagram showing business districts in Pontine outside Rome, c1960. Rossi was writing against the strategic planning of groups like AUA because of their diagrammatic outlook. By contrast Rossi wrote of the concreteness of architectural form.
4.23-4.26. Front covers showing thematic similarity and difference of texts preceding Rossi's: The Image of the City (Lynch, 1960), The Architecture of the Big City (Hilberseimer, 1927), The Architecture of the City (Rossi, 1966). English translation, 1982.

and the behavioural reading of the city like that by Lynch. Similarly, Aymonino commented positively on Rossi's attempt to disentangle the dynamic factors of the city that determine urban form such as the social, political and economic.

Claudio D'Amato discussed *The Architecture of the City* as contributing to the debate on architectural autonomy.[38] A thesis that was picked up by Peter Eisenman. As Editor and cofounder of the architectural journal Oppositions, Eisenman published an essay by Rafael Moneo in *Oppositions 5*, in 1976, which helped introduce Rossi to an English speaking audience.[39]

For Moneo, *The Architecture of the City* is the first analogue of Rossi's developing "architectonic thought."[40] Olmo has commented that *The Architecture of the City* represents at the same time, an autonomous work of architectural poetics, a theory of architecture and the city, and a necessary point of reference to understand Rossi's buildings and drawings. He says that it becomes the material of Rossi's analogical city, about which Olmo writes, "it is useless to follow its author."[41] Tafuri underlined something similar in "L'architecture dans le Boudoir: The language of criticism and the criticism of language," published in *Oppositions* 1974, writing that Rossi's theoretical works are but "poetics," and that it is, "... useless to contest a literary work of his: it has but one use, that of helping to understand the spiritual autobiography that the author inscribes within his formal compositions."[42]

Tafuri, crucial to the debate around Rossi, is worth noting for a few of his statements about the work of Rossi. In the 1968 *Theories and History of Architecture*, Tafuri wrote that the, "silent architectural objects" of Rossi are evidence that "architectural criticism merges with the criticism of the city."[43] It is through typological-criticism that architecture asks questions about architecture and by architecture, so that a critique of a singular architectural work is also a critique of the city and of architecture as a whole. Later, in the 1985 *History of Italian Architecture*, Tafuri wrote that Rossi's work sank into a realm of images, "whose source was De Chirico, frozen in spaces abandoned by time, and Böcklin's 'unhappy vision.'" Tafuri then writes, "architecture is placed fearfully in the balance: its reality, never denied, is perversely bound to the unreal."[44] In these statements, Tafuri suggests an opposition in Rossi's thinking, from his early formation, to a late period. An observation, rightly or wrongly, attested to by numerous others, who point to the difference between Rossi's two major books *The Architecture of the City*, and *A Scientific Autobiography*. The former was published in 1966 and the latter in 1981, as a collection of Rossi's notebook writing from the years after *The Architecture of the City*. In *A Scientific Autobiography* Rossi said that he viewed his first book as the conclusion to his early years of urban research. A notable, but lengthy, passage from *A Scientific Autobiography* helps to situate Rossi's thinking on his first book.

> Around 1960 I wrote *The Architecture of the City*, a successful book. At that time, I was not yet thirty years old, and as I have said, I wanted to write a definitive work: it seemed to me that everything, once clarified, could be defined. I believed that the Renaissance treatise had to become an apparatus which could be translated into objects. I scorned memories, and at the same time, I made use of urban impressions: behind feelings I searched for the fixed laws of a timeless typology. I saw courts and galleries, the elements of urban morphology, distributed in the city with the purity of mineralogy. I read books on urban geography, topography, and history, like a general who wishes to know every possible battlefield - the high grounds, the passages, the woods. I walked the cities of Europe to understand their plans and classify them according to types. Like a lover sustained by my egotism, I often ignored the secret feelings I had for those cities; it was enough to know the system that governed them. Perhaps I simply wanted to free myself of the city. Actually, I was discovering my own architecture. A confusion of courtyards, suburban houses, roofs, gas storage drums, comprised my first exploration of a Milan that seemed fantastic to me. The bourgeois world of villas by lakes, the corridors of the boarding school, the huge kitchens in country houses - these were memories of a landscape out of Manzoni which disintegrated in the city. Yet their insistence on things revealed a craft to me.[45]

This passage gives an indication of the opposing positions of Tafuri, and others on the development of Rossi's thinking. In the first part, Rossi puts forward his belief in defining and clarifying the city within the theoretical apparatus of a text. He would look to typology and morphology, classifying the parts of the city, understanding their plans, searching for the "fixed laws" of architecture. In the second part, Rossi puts forward the "secret feelings," he had for the courtyards, galleries, houses, and storage drums. In highly condensed form, this passage describes the contradiction of "laws" and "feelings" inherent to Rossi's thinking.[46]

Fig. 4.27.
Fig. 4.28.
Fig. 4.30.
Fig. 4.31.

The opposition was read as an absolute by Peter Eisenman. We need to remember that *A Scientific Autobiography* was published in English before *The Architecture of the City*, and that the latter was read via the former by Eisenman whom, in his Introduction to the American translation of *The Architecture of the City* provides a quasi-psychoanalytical account of Rossi's own "memory." The thrust of Eisenman's introduction is to convey the transformation of Rossi's design process based on the idea of type, to a seemingly internalised, "analogous design process."[47] Eisenman puts forward an idea of Rossi's architecture as based on the individual notion of memory. Writing in the Preface to *The Architecture of the City* Eisenman wants his Introduction to be understood as an attempt, "to enter into this memory and in this sense [Eisenman's introduction] serves as a kind of analogy of an analogy, a creation of yet another artefact with its own history and memory."[48] The "analogy of an analogy" describes quite well Eisenman's Introduction, which suffers from an over-interpretation. Beginning with the image of Hadrian's Mausoleum as formally similar to a labyrinth, Eisenman interprets it as representing the death of humanism, and also a personal transformation for Rossi. A distancing by Rossi from both the humanist principle of subjectivity, and from Modernism's functionalist principle. Folding in Alberti's analogy of "the city to be like a large house, and the house like a small city," Eisenman writes that, "Rossi's psychological subject - the autonomous researcher - still continues to seek his own home in the collective house of the city."[49] This statement contains a further analogy because Eisenman has already related the "autonomous researcher" to a "psychoanalyst."[50]

Let us move on from this and say that *The Architecture of the City* was a preliminary evaluation of the Modern Movement legacy, an investigation into the singularity of architectural form, the setting out of formal principles and theoretical categories with which to analyse and describe the city as it evolved over time in relation to socialised urban life.

Analytical de-Montage of The Architecture of the City

The Architecture of the City is divided into four chapters. Rossi tells us in his Introduction that the first chapter considers problems of classification, description, and hence typology. The second describes the different elements that structure the city, and he outlines categories for urban analysis. The third, Rossi tells us, introduces the concept of *locus* and the role of urban history. The final chapter is on the dynamics of the economic and political aspects of the city. Rossi tells us that he investigates the "spatial structure" of the city in the first three chapters, then the "generative-functional" aspects in the final. Themes in each chapter are correlated with aspects from other chapters and it makes for a complex and dense argument. The opposite page diagrams the major relationships and categories from *The Architecture of the City.* Before discussing them, we will first mention the comparative method of analysis that Rossi puts forth. In viewing the diagram opposite, we will start at the centre and work outward.

Fig. 4.29.

38. Claudio D'Amato, 'Fifteen Years after the Publication of The Architecture of the City by Aldo Rossi', in *Harvard Architecture Reviews: Autonomous Architecture*, ed. by Andrew Anker, trans. by Ellen Shapiro (MIT Press, 1984), Vol. 3, pp. 83–92.

39. Rafael Moneo, 'Aldo Rossi: The Idea of Architecture and the Modena Cemetery' (1976), in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984*, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 105–134.

40. Moneo, 'Aldo Rossi: The Idea of Architecture and the Modena Cemetery', p. 108. The second half of Moneo's essay describes how the theory is manifest in the design for Modena Cemetery.

41. Carlo Olmo, 'Across the Texts: The Writings of Aldo Rossi', *Assemblage*, 1988, 91–121 (p. 98).

42. Manfredo Tafuri, 'L'Architecture Dans Le Boudoir: The Language of Criticism and the Criticism of Language', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984*, trans. by Victor Caliandro (New York: Princeton Architectural Press, 1974), 291–316 (p. 314). Also published as a chapter in Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-gardes and Architecture from Piranesi to the 1970s* (Cambridge, Mass.: MIT Press, 1990). Tafuri's dissent is p. 357.

43. Manfredo Tafuri, *Theories and History of Architecture*, trans. by Giorgio Verrecchia (London: Granada, 1980), p. 130. Originally published in Italy entitled *Teorie e storia dell'architettura*, 1968.

44. Tafuri, *History of Italian Architecture, 1944-1985*, p. 138.

45. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), pp. 15-16.

46. Yet, it is true that Rossi's presence was enigmatic as Luigi Snozzi, who worked alongside Rossi at ETH Zürich, has recently explained. In an interview with Samuel Penn and Penny Lewis for the AE Foundation, Snozzi revealed his scepticism to the teaching of Rossi, yet said that the "presence" of Rossi was enough education for the students. See Luigi Snozzi, 'Architecture and Education: Luigi Snozzi', interview with Penny Lewis and Samuel Penn, trans. by Daniel Serafimovski and Jenny Dubowitz, 2013, available: <http://aefoundation.co.uk/architecture-and-education-luigi-snozzi/>.

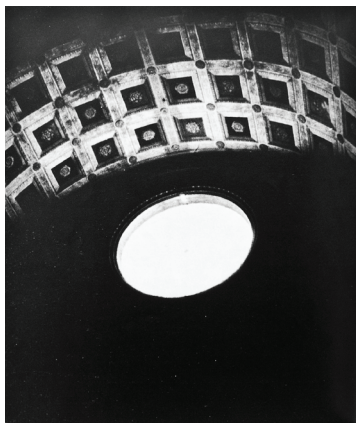
47. Peter Eisenman, 'The Houses of Memory: The Texts of Analogy', in *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), 2–11 (p. 8).

48. Peter Eisenman, 'Editor's Preface', in *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), unpaginated.

49. Peter Eisenman, 'The Houses of Memory: The Texts of Analogy', p. 10.

50. Ibid., p. 4.

4.27.



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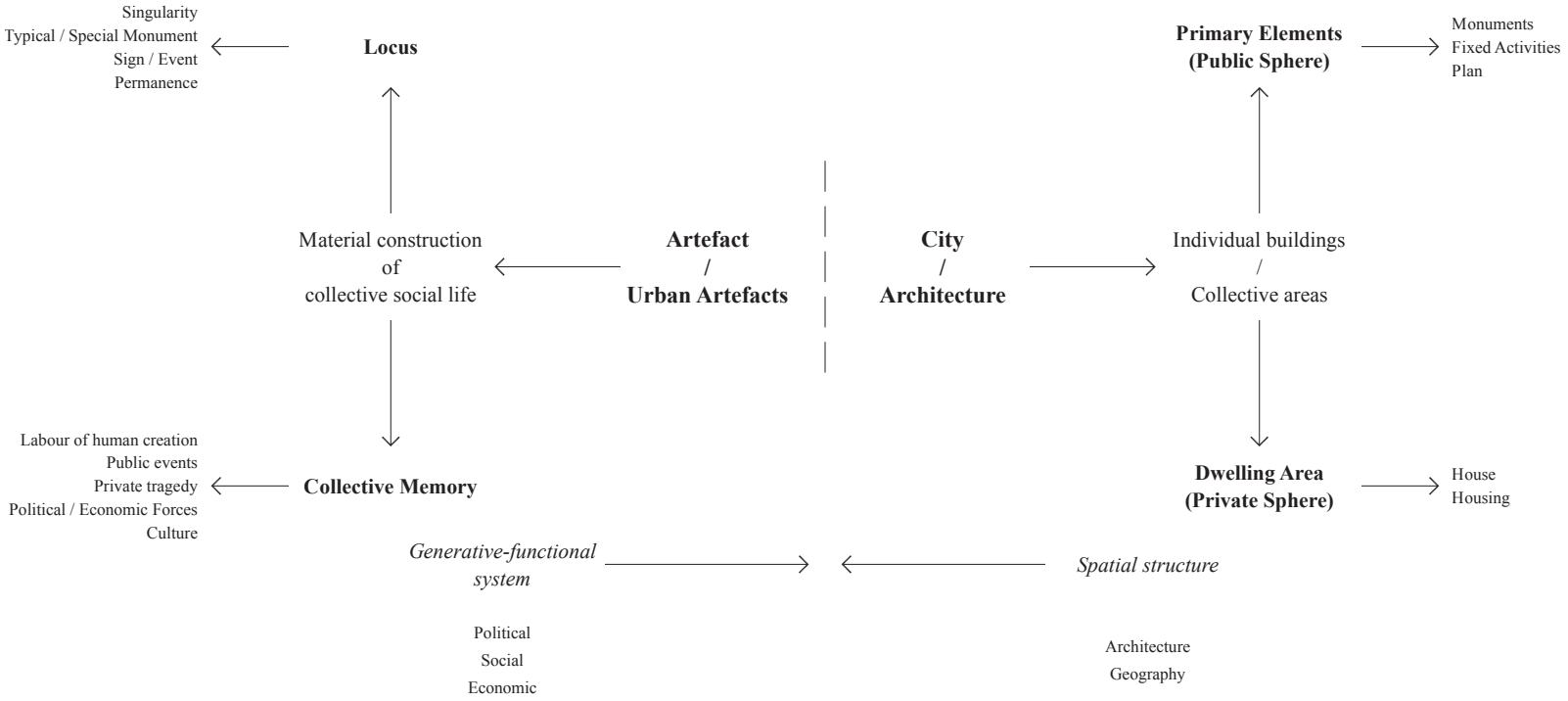

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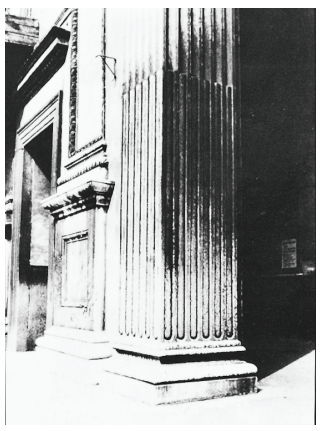

4.31.

Photographs from A Scientific Autobiography:
4.27. Houses on a canal, Milan.
4.28. Alberti's Sant'Andrea, Mantua, oculus.
4.30. Courtyard in Seville.
4.31. Column at doorway of Alberti's Sant'Andrea, Mantua.
4.29. A framework to understand The Architecture of the City. Toward the right describes the formal composition of the city. Toward the left describes the productive forces that the city embodies. Both confront each other and give rise to the particular form that the city will take. The diagram presents the categories Rossi uses, and how they relate to each other using only the keywords put forward in The Architecture of the City.

Comparative Method

In the Introduction to *The Architecture of the City* Rossi writes that he will make use of a comparative method of analysis.[51] He discusses a number of oppositions, the primary one is the relationship between individual and collective, which as Rossi says, becomes manifest in different ways, including: the particular and universal, between the public and private sphere, between public and private buildings, dwelling and dwelling area, building typology and urban morphology.[52] As the diagram indicates, the opposition provided by the monument and the dwelling area is the formal composition of the city. The former standing for a singular building, the latter standing for a larger collective area. This relationship between a single building, to a typology of buildings, and then as elements within the city constitutes a basic hypothesis of Rossi's book.[53]

To this we can add the importance of the historical method. Rossi did not limit his study to buildings of a specific period. He illustrated his thinking with both ancient and modern examples. The Palazzo della Ragione is one such building. Dating from the Medieval period, it has contained many functions and continues to be important in the structure of the city. Thus its form is not defined by any particular function, and is a building that Rossi describes as an urban artefact.

Fig. 4.32.
Fig. 4.33.
Fig. 4.34.

Further, Rossi's historical view of the city is not only concerned with the built actuality of the city but also with how the city has been imagined. To this end, Rossi discusses unbuilt projects such as the colosseum as a wool factory, a project for the Athens Acropolis by Schinkel, Loos' proposal for the Chicago Tribune building, and Antolini's Foro Bonaparte in Milan. Past and present, built and unbuilt are placed in comparative relation.

Fig. 4.37.

In an important section entitled "The City as History" in the third chapter, Rossi reflects on the historical method and describes this from two points of view:

> In the first, the city was seen as a material artifact, a man-made object built over time and retaining the traces of time, even if in a discontinuous way. Studied from this point of view - archaeology, the history of architecture, and the histories of individual cities - the city yields very important information and documentation. Cities become historical texts... .
>
> The second point of view sees history as the study of the actual formation and structure of urban artifacts. It is complementary to the first and directly concerns not only the real structure of the city, but also the idea that the city is a synthesis of a series of values. Thus it concerns the collective imagination.[54]

In the first paragraph, the city is a material artefact. Built by human labour, and built by labour over time. It is concrete and not abstract. Using typology as an analytical method, we can read the city like a text. In the second paragraph, Rossi goes beyond the physical form of the city: the city is conditioned by myths, and collectively produced values, events, and ideas. These comments should be remembered as we now turn to the city.

City and Architecture

For Rossi, the city is at once architecture, so architecture came into being as immediately collective. He opened *The Architecture of the City* by writing of the reciprocal relationship between architecture and city: "The city, which is the subject of this book, is to be understood here as architecture. By architecture I mean not only the visible image of the city and the sum of its different architectures, but architecture as construction, the construction of the city over time."[55] So the city grows over time and is produced from architecture, giving form to society, to civilisation. As Rossi said elsewhere, "Architecture came into being with the first traces of the city; it is deeply rooted in the formation of civilisation and is a permanent, universal, and necessary artefact."[56] Men built houses, monuments, private and public buildings, and built them out of necessity and with aesthetic intention. Architecture, which is the city as Rossi argued, is the spatial, material and concrete manifestation of social, economic, and political forces. Architecture always interacts with these forces, and is their built manifestation. Hence the connection to Rossi's historical method above.

In "The Difficult Whole," Aureli notes Rossi's commitment to uniting city and architecture, describing this as the aspiration to a "difficult whole."[57] While Venturi's difficult whole represented an aspiration to a complex and contradictory architectural language, Rossi's difficult whole represented a complex and contradictory aspiration to unite the formal and the political aspects of city and architecture.[58] For this reason, Rossi argued for the repositioning of architecture as an integral part of society. This, as we will see in later chapters is also the argument for the autonomy of architecture.[59]

Rossi discusses Athens in Chapter Three. We can briefly mention this because it helps us to understand how the city came into being, and on the relationship between the formal and political. Rossi cites both Karl Marx and Marcel Poëte in relation to the Greek *Polis*. The former writing in the *Grundrisse* about Greek art as, "the childhood of humanity," and asking if Greek poetry is still possible under industrial modernity: "... is Achilles possible with powder and lead? Or the Iliad with the printing press, not to mention the printing machine? Do not the song and the saga and the muse necessarily come to an end with the printer's bar, hence do not the necessary conditions of epic poetry vanish?"[60] Marx writes about the relationship between Greek art as an unattainable model, and the social development of the Greek society: "The charm their art has for us does not conflict with the undeveloped stage of the society in which it grew. On the contrary [its charm] is inseparably linked with the immature social conditions which gave rise to it, and which alone could give rise to, and which can never recur."[61] For Marx, although Greek thought cannot be replicated, its conceptual power persists in our collective imagination.

When Rossi quotes Poëte, it is on the composition of Athens. As the latter writes, "... we find as generating elements of the city the sites of the organs of a free political life (boule, ecclesia, areopagus) and the buildings connected with typically social needs (gymnasium, theatre, stadium, odeum). A city like Athens represents a higher level of communal human life."[62] While the Acropolis was always spatially differentiated from the city, on its "high ground" the buildings sited on the Acropolis were symbolic and public, yet also housed the King. The political Council were located in the Boulueterion on the west edge of the Agora, in which the citizens assembled for discussion. Residential areas were formed around this central space of the Greek city. The Greek *Polis* was thus divided into a triad of Acropolis, Agora, and the dwelling area. The Agora, as the open, common, collective space of the Greek city, was neither entirely public, nor symbolic, nor political. Rather, it was the space in which these aspects confronted one another, with the citizen moving from the private home, the King moving from the Acropolis, and both taking part in public discussion within the Agora. The Agora is the spatial and formal representation of this encounter of confrontation and exchange.[63]

Fig. 4.35.
Fig. 4.36.

It is worth mentioning briefly the other city "model," the Roman *civitas*. The main difference between the Greek and Roman city were their political systems. The former based on the autonomy of each city, hence the *polis* as a city-state. The latter was instead produced under the centralised power of Imperial Rome, and came into being through military encampments, which Rossi notes as the basis of a city morphology.

In the final chapter of *The Architecture of the City*, Rossi explains three general stages in the industrial transformation of the city. First, in the Medieval era, when dwelling place and work place were spatially unified. The worker lives above the work place so that the sphere of production is connected with the private realm of the family and independent artisan labour. Second, when the relationship between dwelling and work was divided, so the worker lives somewhere other than the place of work. We can think of the separation of factory and home, or alternatively the notion of "downtown." Third, with the advent of individual means of transport so that it is unnecessary to rely on public transport and therefore the spatial gap is widened between work and dwelling places. Remembering that Rossi was writing in the 1960s, he does not put forward the notion of post-Fordism, which – in Europe at least – was

51. Ibid., pp. 21-22.

52. Ibid., p. 21.

53. Ibid., p. 35.

54. Ibid., p. 128.

55. Ibid., p. 21.

56. Ibid., p. 21. Also see the important essay Aldo Rossi, 'Architecture for Museums (1966)', in *Aldo Rossi: Selected Writings and Projects*, ed. by J O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 14–25.

57. Aureli, 'The Difficult Whole: Typology and the Singularity of the Urban Event in Aldo Rossi's Early Theoretical Work, 1953-1964', *Log*, ed. by Cynthia Davidson, 9 Winter/Spring (2007), 39–61.

58. See Robert Venturi, *Complexity and Contradiction in Architecture* (New York; Boston: Museum of Modern Art, 2002), pp. 88-105.

59. For now, let us be clear that autonomy in the work of Rossi, was not autonomy in the sense of disciplinary removal of architecture from contemporary society as for example in Peter Eisenman's understanding.

60. Karl Marx, *Grundrisse: Foundations of the Critique of Political Economy (Rough Draft)*, trans. by Martin Nicolaus (Harmondsworth: Penguin Books, 1973), p. 111. Written winter 1857-58, not published until 1953.

61. These are the words by Marx written via Rossi, *The Architecture of the City*, p. 134. Also see Marx, *Grundrisse*, p. 111.

62. Poëte in Rossi, *The Architecture of the City*, p. 136. Where boule is council; ecclesia is assembly of citizens; areopagus is court; and odeum is a building for public performance.

63. For a discussion of the life, culture and history of the Greek city, see Humphrey D. F Kitto, *The Greeks* (Harmondsworth: Penguin, 1965).

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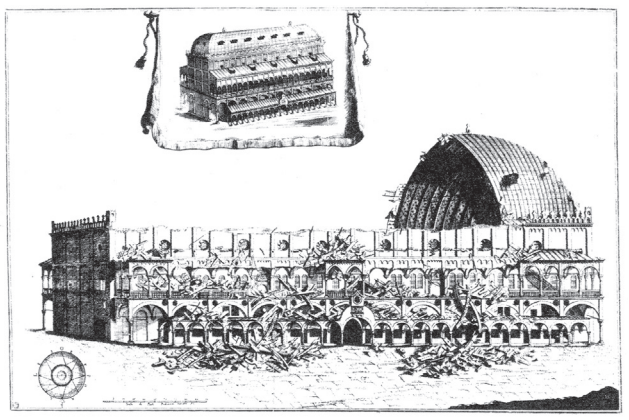

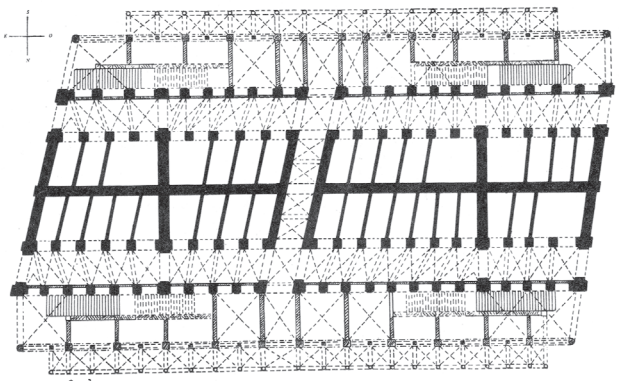

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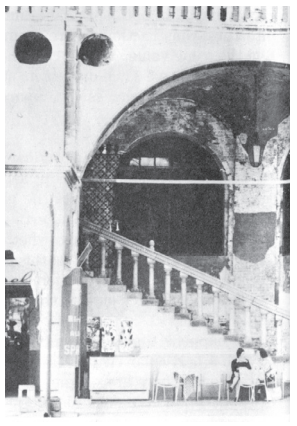

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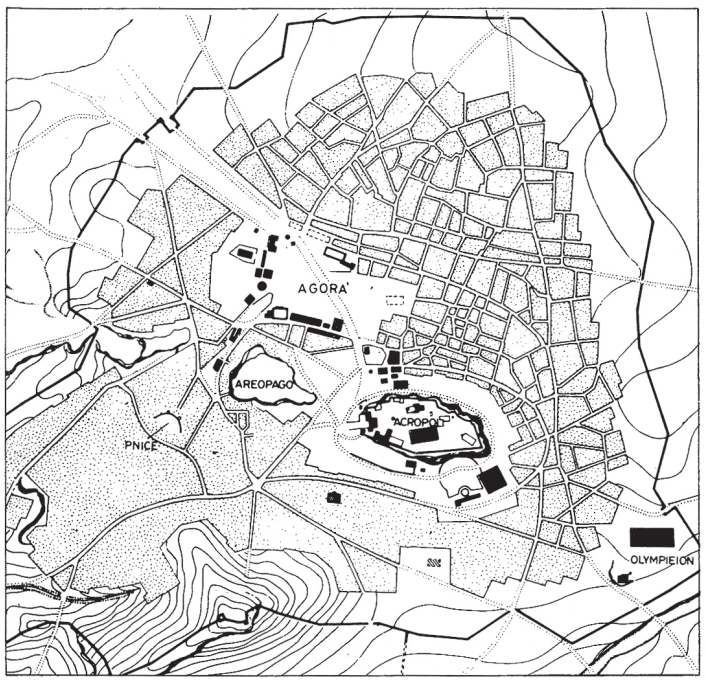

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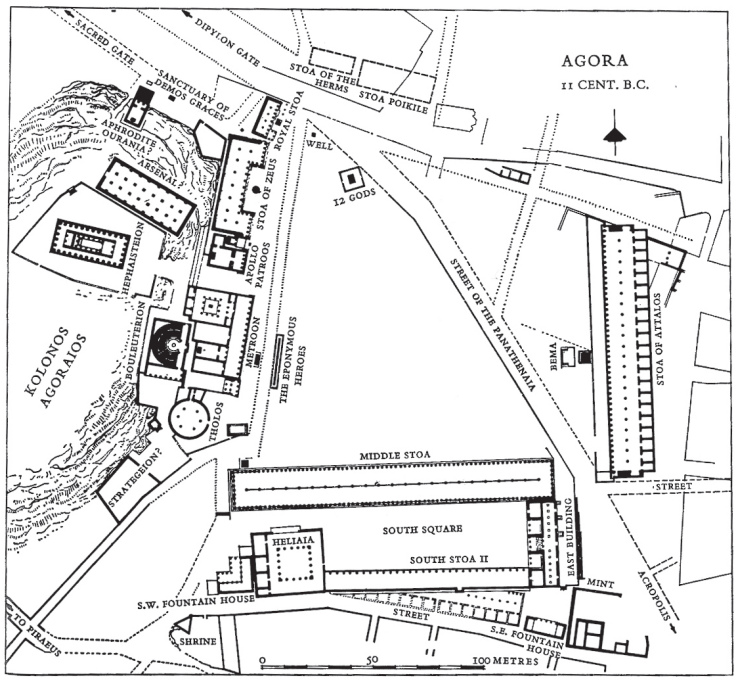

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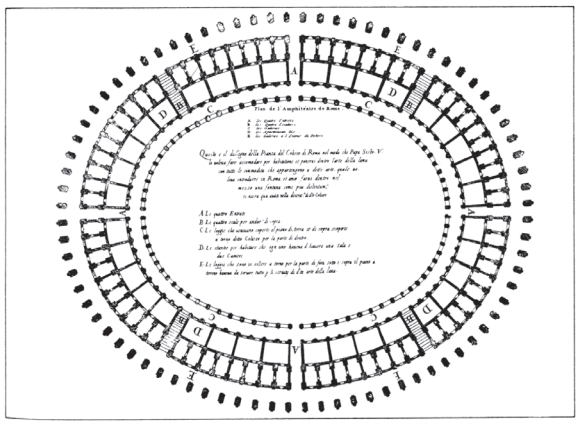


4.37.

4.32-4.34. Palazzo della Ragione in Padua, which dates from 1219. Photographs and drawings from The Architecture of the City. Drawing as it appeared after ruined by a hurricane, and ground floor plan with thirteenth-century walls toned black.
4.35. Plan of Athens, around 5BC. Public buildings around the Agora and symbolic buildings on the Acropolis are toned black. These are surrounded by residential quarters, shown dotted.
4.36. Restored plan of Agora around 2BC. The temple and the Agora surrounded by housing are the primary socio-political and symbolic elements of the city and generate its form.
4.37. Plan of Pope Sixtus V's project for the transformation of the Coliseum in Rome as a wool factory, 1590. A: Entrance, B: Stairway, C: Galleries, D: Workers apartments, E: Ground floor external entrance.

in its developmental stages at this time. It is worthwhile then, to briefly note the post-Fordist mode of industry as another stage of industrial transformation. The physical raw materials of real estate and machinery, crucial during the Fordist era, are now less important than the "cognitive-immaterial" qualities of knowledge, language, imagination and the inventive capacity of "human resources." A process that relies on markets, networks and communication, and one that is spatialised by global urbanisation. Although none of these four conditions are absolute, they nonetheless contribute to our understanding of the spatial, formal, and social evolution of the city by industry.

Artefact and Urban Artefacts

Closely related to the categories of city and architecture, the artefact provides a meta-category in Rossi's thinking and can be considered in two ways. First, to the city as an artefact and second, to the city made up of individual urban artefacts. We can remember that Rossi described the city as a "construction," so the city as an artefact has been produced through human labour over time. A time which extends, as has been said, from the ancient to the modern. Concurrently, architecture is also an artefact, and for the same reason. Thus, in Rossi's analysis, it is possible to understand the wider city through an analysis of its individual buildings, which are the urban artefacts. However, the urban artefact is not only an individual building, but can also be a street, a square, or a district.[64] What we can say about the relationship between city as artefact and the individuality of the urban artefact, is that the urban artefact is a singular form which makes legible a particular moment in the history of the city.

Diocletians Palace in Split is another of Rossi's examples. The city of Split started life as Diocletians Palace, growing upon itself within the city walls, developing its own form, and extending along its original axis. The result is that the city refers analogically to the palace. Or put another way, the idea of the city is latent in the idea of the Palace as a singular urban artefact.

Fig. 4.39.
Fig. 4.40.

It is interesting to note some examples of the category of artefact. John Summerson who is briefly referenced in a footnote by Rossi, Lewis Mumford, who is also referenced by Rossi, and Hannah Arendt. In his essay "Urban Forms," John Summerson writes on how the architectural historian should approach the city.[65] He summarises the extent of material that the historian must deal with:

> First, he must learn from the geographers the factors of site and situation and the general morphology of the city as it stands. Next he must take possession of whatever the political, economic, industrial and social historians can give him. After that he must master the whole corpus of topographical material - not only maps, but prints, drawings, photographs and descriptions of lost buildings. Last, he must know the city - know its modern face, its ancient monuments and equally, the scraps and fragments which are neither ancient nor monuments but still significant and instructive flotsam from the past.[66]

Summerson continues, describing the main issue of the city as, "tangible substance, the stuff of the city, and that implies form."[67] He writes that we need to study the form of the city, "as the resultant of a complex of social, psychological, and economic forces," and it is in this way that we can understand the city as an artefact.[68] From this point of view we can see that the historian views the city in its totality and not only a physical thing in the city, but the entire history, geography, structure and connection to the social and political life of the city.

At the same time, however, the quality of the urban artefact is in its uniqueness. In this regard, Rossi asks us to compare the urban artefact with a work of art, which is also a material construction. To quote Mumford in *The Culture of Cities*, "The city is both a physical utility for collective living and a symbol of those collective purposes and unanimities that arise under such favouring circumstances. With language itself, it remains man's greatest work of art."[69] On one hand the city as an artefact is collectively produced. On the other, it is a unique construction. To understand how the urban artefact is related to the work of art Rossi writes the following:

> All great manifestations of social life have in common with the work of art the fact that they are born in unconscious life. This life is collective in the former, individual in the latter; but this is only a secondary difference because one is a product of the public and the other is for the public: the public provides the common denominator.[70]

What we find in this statement is a reference to Mumford who has said that the mind takes form in the city, and in turn the urban form conditions the mind. Rossi writes that the city is a comprehensive representation of the human condition.

Let us recall Arendt in her book *The Human Condition*, who has written of the permanence of the work of art.[71] As she writes, works of art are "thought things," and thought is the transformation of mute feeling. What makes the thought a reality, the reification and actualisation of a work of art, is workmanship. As Arendt writes, it is, "the same workmanship which, through the primordial instrument of human hands, builds the other durable things of the human artifice."[72] She lists the painting of an image, the modeling of a figure, the composing of a melody, to which we can add the drawing of a plan, and the building of a city. Arendt spends time discussing poetry, whose material consists of the language of words and sounds. The poem, when spoken, leaves no trace. Yet poetry, when written is transformed into a tangible thing among things. As Arendt writes, life manifests itself in action and speech, which share with poetry no trace once the moment of action and the spoken word have passed. The relationship to Rossi's analogy between the city as an artefact and the work of art is found in the few sentences that conclude Arendt's thinking on the work of art:

> In order to be what the world is always meant to be, a home for men during their life on earth, the human artifice must be a place fit for action and speech, for activities not only entirely useless for the necessities of life but of an entirely different nature from the manifold activities of fabrication by which the world itself and all things in it are produced.[73]

We can say that the values inherent in Arendt's words – the city as a place fit for action and speech, of the acts of life – pervade Rossi's thinking on the artefact. He writes that the model of architecture is the natural labour of man in constructing his first house, that the city is the human thing par excellence. So the city as an artefact constitutes the repository of human labour, and the collective memory of its people.

Collective Memory

We should note here the complexity of Rossi's thinking on the concept of collective memory, in *The Architecture of the City.* As we have noted, Rossi recognises that the work of art is, "born in unconscious life," and that the urban artefact is like a work of art.[74] He also writes: "With time, the city grows upon itself; it acquires a consciousness and memory."[75] Rossi's thinking traverses a difficult opposition between individual subjectivity as the moment of decision, and the wider historically determined socio-political sphere of collective memory. In the section entitled "The Collective Memory," Rossi quotes the French sociologist Maurice Halbwachs from his posthumously published book *The Collective Memory*:

> When a group is introduced into a part of space, it transforms it to its image, but at the same time, it yields and adapts itself to certain material things which resist it. It encloses itself in the framework that it has constructed. The image of the exterior environment and the stable relationships that it maintains with it pass into the realm of the idea it has of itself.[76]

In his book, Halbwachs formulated a theory of collective memory. He begins by outlining a number of testimonies that describe the significance of other persons when constructing our memory of events and places. Halbwachs writes that individual memory cannot function without words and ideas, which the individual has not invented, but appropriated from the social environment. A social environment which is modified by events such as: war, rebellion, national ceremony, popular festivity, new technology, and new buildings. Although these events are collective, Halbwachs writes that, "they also dissolve into a series of

64. Rossi, *The Architecture of the City*, p. 33.

65. John Summerson, 'The City as an Artifact: Urban Forms', in *The Historian and the City*, ed. by Oscar Handlin and John Burchard (Chicago: MIT Press, 1963), 165–176.

66. Summerson, 'The City as an Artifact: Urban Forms', pp. 165-166.

67. Ibid., p. 166.

68. Ibid., p. 166.

69. Lewis Mumford, *The Culture Of Cities* (London: Secker & Warburg, 1940), p. 5. First published in 1938. See Rossi, *The Architecture of the City*, p. 180.

70. Rossi, *The Architecture of the City*, p. 33.

71. Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1989). First published in 1958.

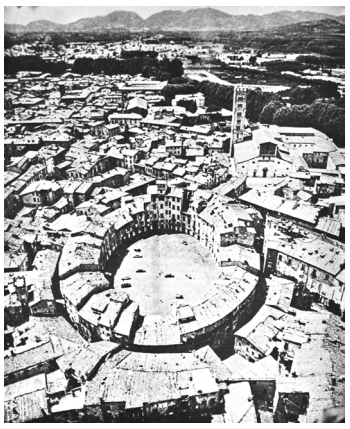
72. Arendt, *The Human Condition*, p. 169.

73. Ibid., pp. 173-174.

74. Rossi, *The Architecture of the City*, pp. 32-33.

75. Ibid., p. 21. Also refer p. 131 and p. 143 for discussions on city consciousness.

76. Halbwachs quoted by Rossi, *The Architecture of the City*, p. 130. See also Maurice Halbwachs, *The Collective Memory*, ed. by Mary Douglas, trans. by Francis Ditter and Vida Ditter (New York: Harper & Row, 1980). First published in France under the title *La mémoire collective* in 1950.



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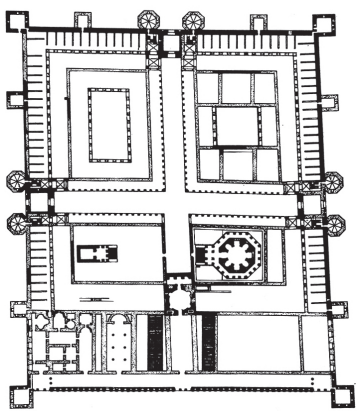

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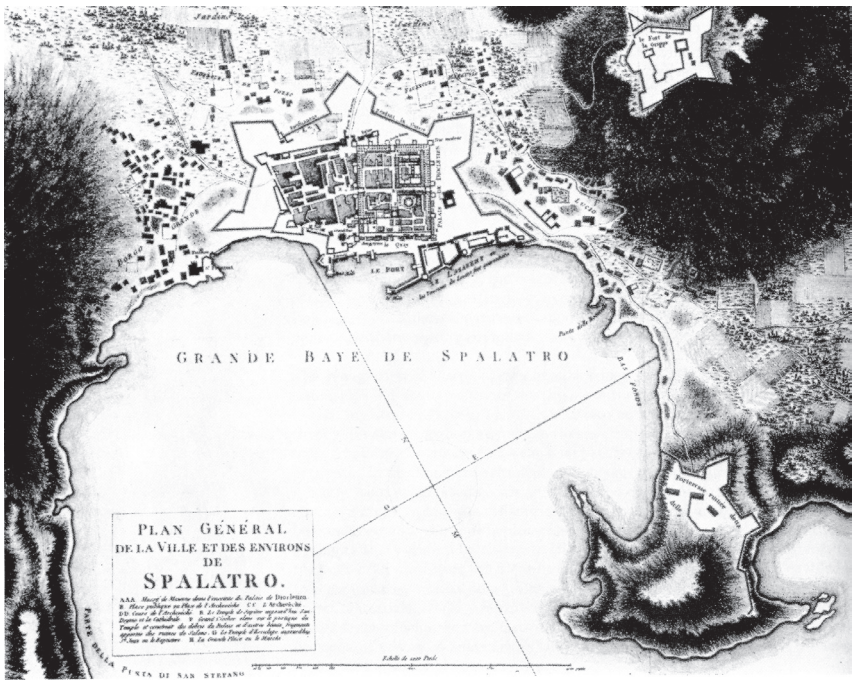

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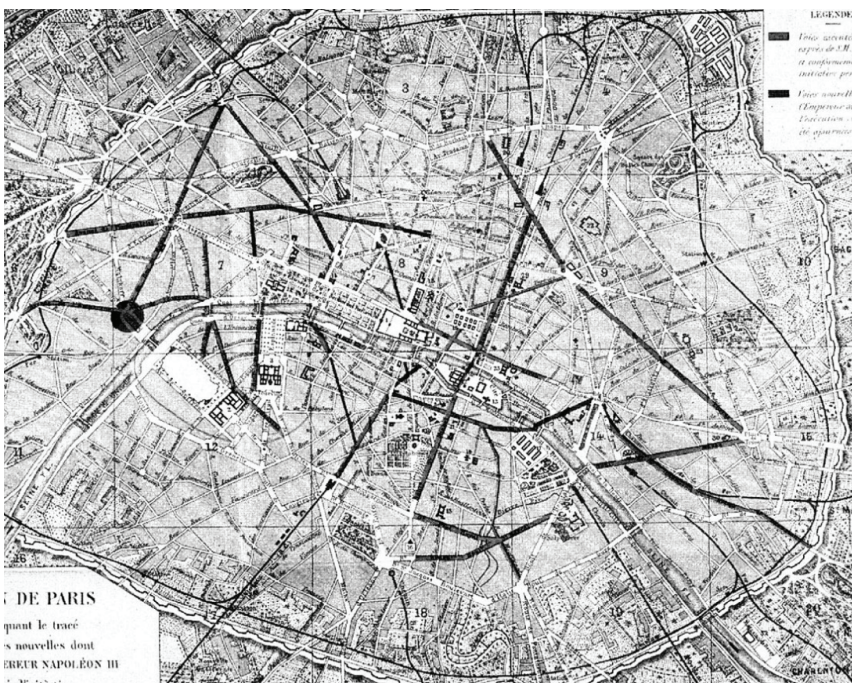

4.41.

4.42.

4.38. Aerial view of Roman amphitheatre transformed into a marketplace surrounded by housing, Lucca, Italy.
4.39. Reconstructed plan of Diocletian's Palace, Split. The original nucleus of the city is the house.
4.40. Enclosed by walls, the city of Split grows out of the house of Diocletian, according to its own formal nature. The axis of the city, although kinked, is aligned with the axis of the gate within the walls of the palace.
4.41. Haussmann's boulevards toned black on a plan of Paris. The boulevards cut violently through Paris and although not corresponding to the original nucleus of the city, their socio-political and formal shock have become the idea we have of Paris.
4.42. Gustave Caillbotte, A Balcony, Boulevard Haussmann, 1880. The melancholic removal from the city depicted in the paintings of Caillbotte.

images traversing the individual consciousness."[77] In this sense, collective events become individual images, some of which stand out in the mind due to a certain intensity, or "unique quality." After outlining the apparent opposition between autobiographical and historical memory, Halbwachs describes the opposition of "Collective Memory" and "History." The former looks for resemblances with the past, so evokes the past's presentness. While the latter looks for differences, thus keeping a sense of distance. In the last chapter, Halbwachs argues that collective memory, which is socially constructed, relies on a spatial framework of physical surroundings. For Rossi, the physical surroundings are the structure of the city. As Rossi writes, memory, "is the consciousness of the city."[78]

Halbwachs is one of the most cited authors in *The Architecture of the City*, and Rossi writes a section in the final chapter on Halbwachs' thesis on economic forces and the city.[79] For Halbwachs, economic forces predominate in the evolution of the city, and arise out of necessity as a general and continuous aspect of the city. It is from the economic standpoint that Halbwachs studies the phenomena of property expropriation, for which Rossi finds three causes: the accidental expropriation, for example through fire; normal expropriation through gradual obsolescence; and artificial expropriation by speculation. In each case, the resultant physical effect on the form of the city remains firstly destruction, then construction. Rossi gives an example of the large-scale expropriation in Paris by Haussmann to illustrate.

Haussmann suggested that there were tactical reasons for the transformation of Paris, such as the destruction of districts which were not favourable for the gathering of troops. However, importance must also be attributed to hygienic strategy, and aesthetic motivation of governmental power. This leads to the evolution of the city dependent on certain individual personalities, as Rossi writes, "whose wills acted as historical forces."[80] On the role of the individual Rossi quotes Halbwachs, "'A street is called 'Rambuteau,' an avenue 'Péreire,' or a boulevard 'Haussmann,' not, one would think, to render homage to these great speculators or administrators who served the public interest ... these names are signs of origins.'"[81] The Paris of Haussmann, is also the Paris of the boulevard, which Gustave Caillebotte has painted. The boulevard is a particular event in the history and politics of Paris that has now become an idea of the city, even though it is radically different to that of the origin of Medieval Paris. The boulevard itself is an "urban artefact."

Fig. 4.41.
Fig. 4.42.

Motivated by economic initiatives, the demolition and reconstruction of the city by speculation become part of the collective memory of the city, as Rossi writes at the beginning of *The Architecture of the City*, "... destruction and demolition, expropriation and rapid changes in use and as a result of speculation and obsolescence, are the most recognisable signs of urban dynamics."[82] This dynamic interrupts the destiny of the individual and their participation in the collective. What Rossi finds important in Halbwachs' thesis on expropriation is in the way economic factors, the will of individual personalities and societal tendencies, are spatialised through the physical evolution of the city. It is precisely in these moments of intensity, confrontation, and rupture which directly impact on the form of the city that the city develops its "memory."

Locus

Rossi borrowed the category of *locus* from the discipline of urban geography, and in particular he cites Maximilien Sorre who postulated the existence of "singular points" within the city.[83] If we remember that Rossi defined the urban artefact as a singular moment within the city – such as Haussmann's boulevard's – we can begin to see how locus and urban artefact are related: the singularity of the urban artefact as a point within the city. Again, if we remember that the urban artefact has been defined as constructed over time, and as cities are subject to events which can be ancient, modern and more recent, these events leave a memory. The locus is the place upon which these events are marked, and as Rossi says, "it is at once singular and universal."[84] The urban artefact is the sign of this event, which is described by the category of locus, and retained as a moment within the collective memory of the city.[85] This can be elucidated with at least two examples.

In the first we can turn to Rossi's example of the Catholic religion. In this case, the Church has global reach so is a universal concept. The specific location becomes second. However a singular point does still exist, in the seat of the Pope as a single centre. As are places of pilgrimage like the chapels of Sacro Monte which are the sign of the event of God. Rossi says the following:

Fig. 4.43.

> Could one not say that the cathedrals and churches scattered throughout the world together with St. Peter's *constitute* the universality of the Catholic Church? I am not speaking of the monumentality of these works of architecture, nor of their stylistic aspects: I refer to their presence, their construction, their history, in other words, to the nature of urban artefacts. *Urban artefacts have their own life, their own destiny*. When one goes to a charitable institution, the sadness is something almost concrete. It is in the walls, the courtyards, the rooms. When the Parisians destroyed the Bastille, they were erasing the centuries of abuse and sadness of which the Bastille was the physical form.[86]

Another example is related to our discussion on *la nuova dimensione.* As has been said, the new dimension concept was advocated in the boom years of Italy in the 1950s and early 1960s, in which occurred mass immigration from the poor south of Italy to the industrialised north. With this immigration came pressure on cities in terms of work and housing, and so the planning category of "city-territory," was proposed by Tafuri, amongst others. The city-territory concept had the effect of dispersing the labour force throughout the territory, and so extending the city. Rossi opposed the city-territory concept because he viewed it as a product of capitalist urban development. As an alternative, he proposed the idea of locus. Aureli has argued that the locus is a formal singularity, and a political category that opposes the prevalent notion of city-territory.[87] The locus becomes part of the collective memory of the city because it is through productive forces like the historical, political, economic and social which are manifest in architectural form. These forces change city form, and these changes in form are specific to each city, giving rise to collectively produced memory, but manifest in singular points. We can now say that *singularity* describes the attempted unity of the artefact, the succession of events that are marked by the locus, and the mind of the makers including the individual personality.

Our discussion of *The Architecture of the City* up to now has been concerned with understanding the theoretical categories of artefact, collective memory, and locus, and how they describe the forces within the city. We have also begun to discuss how these forces are concretised in the city by selecting a number of examples. Let us now turn to the categories that Rossi used to describe the composition of the city.

Study Area and Dwelling Area

The *study area* delineates a limited area that can then be used to describe the larger urban whole. In this way, Rossi proposed that any single part of the larger city also constitutes a smaller city within. We have already discussed this in relation to Rossi's view of the city as the sum of many diverse parts, with each part differentiated in sociological and formal characteristics. "The city in its totality and beauty is made up of numerous different moments of formation; the unity of these moments is the urban unity as a whole."[88] As we have said, these moments are both historical and formal. By defining the concept of study area, Rossi recognises that there are both specific and more general qualities within the urban whole.

Closely related to the study area is the *dwelling area*, the major private sphere of the city. As housing constitutes the greatest surface of the city, the dwelling area helps to define the overall form of the city, and can in turn summarise the idea of the city.[89] Roman fortified settlements, for example, have become a type of urban formation, as can be seen in Turin. That city started life as a Roman camp, and has extended in its various directions outward always according to the grid.

Fig. 4.44.
Fig. 4.45.

The house is a unit of the dwelling area and Rossi cites Viollet-le-Duc who said that the house characterises the customs, tastes and usages of a people. As Rossi writes, the house which, "materially represents a people's way of life, the precise manifestation of a culture, is modified very slowly."[90]

Primary Element

Rossi tells us that the dwelling area and primary elements are the two principle

77. Halbwachs, *The Collective Memory*, p. 58.
78. Rossi, *The Architecture of the City*, p. 131.
79. Ibid., pp. 141-144.
80. Ibid., p. 142.
81. Halbwachs via Rossi, *The Architecture of the City*, p. 140.
82. Rossi, *The Architecture of the City*, p. 22.
83. Ibid., p. 103.
84. Ibid., p. 103.
85. Ibid., p. 106.
86. Rossi, *The Architecture of the City*, p. 101.
87. Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013), pp. 53-69.
88. Rossi, *The Architecture of the City*, p. 64.
89. Ibid., p. 65.
90. Ibid., p. 70.

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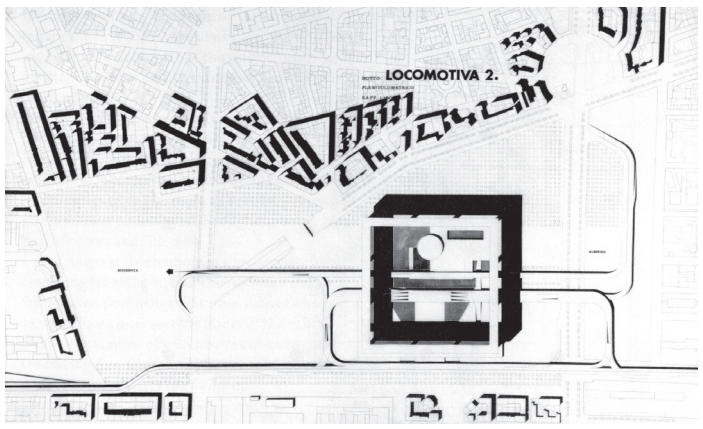


4.45.

Idea of Type
in the work of Rossi

Analytical-Thematic Framework	**Dialectical Principle of Design**
Historical relations Composition of the city	Permanent urban forms Generic volumes Serial production

4.46.

4.43. View of the Sacro Monte at Varese, Italy. Chapels flank the street to the Holy Sepulcher.
4.44. Turin has its origin in 28AD as a Roman fortified settlement. Turin grew, with larger walls, then extended with ramparts by the sixteenth-century, and always extending within its own formal condition of the grid, which has become a type of urban formation.
4.45. Rossi's project for the Turin Centro Direzionale, 1962. Roof level site plan which we can see in relation to the grid of Turin.
4.46. A preliminary framework to understand Rossi's idea of type. On one hand, type is a generalising analytical and thematic framework to read the city as a typology of individual buildings to the morphological whole. On the other hand, type is a principle of formal production using historical urban types as the material to be transformed into singular works, thus producing a constant dialectic with the city, its history and its architecture.

urban artefacts of the city.[91] While the dwelling area is concerned with the private sphere of the house and housing, the category of primary element is concerned with the public sphere. Rossi explains that the major primary elements of the city are the *monument*, *fixed activities*, and the *plan*. We can take these in turn.

The *monument* is a fixed point within the city. Usually surrounded by buildings, the monument becomes a focal point, and is both typical and unique. It is typical because in its typological form it refers to a history of types. It is unique because it is singular in form and exists as something unique and individual, in dialectical relation to the larger urban fabric. It is in the monument that memory is concretised. As we can trace the history of the city through the succession of events that have taken place, we can also trace the history of the city through the succession of built monuments, because a monument is the sign that marks an event. We have already discussed Diocletians Palace as a monument that marks the beginning of a city. The Palazzo della Ragione, too, is a monument because it marks the succession of different events. The transformation from Medieval court, to civil government, from governmental to public institution, always enduring as a place of the everyday: a market for the social and economic life of the city. Thus, the relationship between the dwelling area and the monument constitutes the major compositional dialectic of the city. The former giving us an idea of the overall urban morphology of the city, and the latter distinguishable for its exceptional nature in relation to the urban fabric.

Rossi lists *fixed activities* to include public and commercial buildings, universities, hospitals, schools, services, and infrastructure. Fixed activities can be described as a unit of primary elements, in the same way a house is a unit of the dwelling area. As Rossi does not linger on the description of fixed activities, neither will we. The main thing to note is that fixed activities refer to that which is public and collective in character.[92]

In Rossi's discussion of the *plan* he refers to the work of the urban geographer Marcel Poëte, whose theory centred on the concept of persistence. Poëte pointed out that cities maintain their original axis of development growing according to the direction of either the street plan, or toward specific artefacts. This revealed the city's persistence, which is the physical traces of a former time now impressed upon the form of the city. In his analysis, the city originated in a fixed place and is activated by the street, which possesses spatial characteristics (straight/curved, wide/narrow) and also sociological, cultural, and commercial. Thus, an understanding of the street leads to an understanding of the spatial formation of the city. [93] As an example, we could cite the repetition of the grid as a particular spatial formation of Turin, its permanent pattern, and the idea that we have of that city. Once again, we can cite Diocletians Palace and its central axis, from which the city of Split grew.

Permanence

Rossi borrowed the idea of persistence from Poëte, and turned it into his *Theory of Permanence*.[94] Rossi says that permanences present two aspects: either they can be considered as *propelling*, or *pathological*. To illustrate the distinction we can take two examples.

A *propelling permanence* stands for a monument whose form endures through changing functions, and whose role is a focus in the city. Rossi provides the Palazzo della Ragione in Padua as an example. The palazzo has contained a multiplicity of functions over time and these functions are entirely independent of the form. In this case, the palazzo has existed since the thirteenth-century when it was a medieval court, then as a Renaissance town hall, and now as a functioning market, museum, and art gallery it continues to be a point of focus in the city. Rossi writes that, "it is precisely the form that impresses us; we live it and experience it, and in turn it structures the city."[95] Another example is that of Lucca, in which its central square, market, and residential district was originally a circus, the form of which has persisted.

Fig. 4.38.

A *pathological permanence*, by contrast, does not allow change and so stands for those monuments that are isolated in the city and cannot hold different functions. Rossi cites the Alhambra in Granada, Spain as an example, a fourteenth-century fortress built on a mountainous site, which stands isolated from the urban structure of the city. Although impressed by its form as a monument, Rossi says it does not provide a common urban focus and therefore is not integrated into the urban system.[96] The Alhambra stands as a purposeless monumental form, not containing a function, but nevertheless impressive as an autonomous artefact, like a work of art.

Type

Rossi said that the fundamental hypothesis of the *The Architecture of the City* was the study of a typology of buildings in relation to the city.[97] To paraphrase Rossi quoting the Enlightenment theorist Jean-Nicolas-Louis Durand, the walls and columns are the elements which compose buildings, so buildings are the elements which compose cities. The concept of type gave Rossi an apparatus to study the form of the city, classifying it fragment by fragment, as we have put forward in this analysis, taking each of Rossi's main thematic categories in turn. First, type provided Rossi with an analytical and thematic framework for reading the composition of the city and its history. Second as a principle for design, as he writes evocatively toward the end of *The Architecture of the City* and elsewhere: "the history of architecture is the material of architecture."[98] In *A Scientific Autobiography* Rossi writes: "This freedom of typology, once established, has always fascinated me as a problem of form. On this subject I could cite numerous examples, but I would be repeating things I have already said. Certainly I have always been enthusiastic about the taverns set up under the huge arches of the Schnell-Bahn in Berlin, the two-storey kiosks that sit behind the cathedral in Ferrara, and many other things where a particular function causes an event to unfold beneath the most unexpected roofs."[99] So important is type in the work of Rossi, we will only mention these brief words, and then take the idea up fully in the following chapter.

Fig. 4.46.

Summary

We have now outlined the development of Rossi's architectural production from his time at Milan Polytecnico, to the publication of *The Architecture of the City* in 1966, which can be said to synthesise Rossi's many early influences with a theory of the city as an artefact. On one hand, Rossi put forward the city as a work of manual and mental human labour constructed over time and according to social relations. On the other, he said that the city is a spatial structure with the main compositional dialectic the singular monument and the collective dwelling area. It follows that as the first people built houses for shelter and monuments to express human value, the city is produced from a character of necessity and a will to aesthetic expression. We put forward a conceptual framework that summarised Rossi's position.

We discussed a number of Rossi's early built and unbuilt projects and analysed the key theoretical categories from his main theoretical book, ending on the idea of type. Rossi was amongst the first to reintroduce type into the discourse of architecture, beginning in the late 1950s through to the 1960s. It was with the idea of type that Rossi countered the functionalist doctrine of the Modern Movement because the idea of type necessitates both an historical consciousness, as well as a rejection of function as a principle factor in architectural production. Both of which contradict the Modern Movement ethos that rejected history and proposed a cause and effect relation between function and form. For sure, these positions are not absolute and Rossi's relation the Modern Movement is complex. We will expand on this in the following chapter by interrogating Rossi's idea of type and situate it within the lineage of ideas about type by major figures in the discipline of architecture since the Renaissance to the Modern Movement, examining some of Rossi's influences as specific examples.

91. Ibid., p. 97.

92. Ibid., p. 86.

93. Ibid., pp. 55-57. For Poëte, also see M. Christine Boyer, *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments* (Cambridge, Mass.: MIT Press, 2001). First published 1994.

94. Rossi, *The Architecture of the City*, p. 57.

95. Ibid., p. 29.

96. Ibid., p. 58.

97. Ibid., p. 30.

98. Rossi, 'Introduction to the Portuguese Edition of The Architecture of the City (1971)', in *The Architecture of the City*, p. 170.

99. Rossi, *A Scientific Autobiography*, p. 75.

5.
TYPOLOGY
THE IDEA OF TYPE AND THE CANON OF ARCHITECTURE

I would define the concept of type as something that is permanent and complex, a logical principle that is prior to form and that constitutes it.

Aldo Rossi, *The Architecture of the City*, 1966.[1]

When a series of typical forms are selected from the past of a city, they do not come, however dismembered, deprived of their original political and social meaning.

Anthony Vidler, *The Third Typology*, 1976.[2]

Fig. 5.1.

The idea of *type* in architecture provides a conceptual framework to study the history of architecture, and the ethos of the city. As can be seen in canonical texts, theoretical projects, and built examples since Vitruvius, such as those by Alberti, Serlio, and Palladio during the Renaissance, to Laugier, Durand and Boullée during the Enlightenment, Hilberseimer and Le Corbusier in the early twentieth-century, Rossi, Grassi, and Ungers in the decades around 1970, we can view the history of architecture unfolding, from treatise to manual and manifesto. At the same time, the treatise, manual, and manifesto present us with an attitude toward architecture and the city at a particular moment in time. As Rossi wrote in *The Architecture of the City*, the concept of type becomes, "the very idea of architecture," a fact attested to by both practice, he says, and by the treatise.[3] So when we consider the idea of type, we need to examine both built and unbuilt examples. The buildings that form actual parts of our cities, as well as those examples that remained as theoretical projects in the texts of treatises.

Thinking by type is considered an independent category of human reason, which underlines intellectual work. To reason by type is to divide and categorise objects into groups according to a common attribute, shared characteristic, or typical element. In this regard, type can be considered as a conceptual framework. In the last chapter, we said that Rossi used type as an analytical device to study the relationship between individual buildings to the city, and to define themes as well as categories that describe urban forms and spaces. While Rossi's typological framework thematically classified the city, another common method of classification is by specific building. An example is Nikolaus Pevsner's *A History of Building Types* which classified types from the "most monumental to the least monumental, from the most ideal to the most utilitarian, from national monuments to factories."[4] Pevsner puts forward national monuments, town halls, prisons, banks, warehouses, and factories. We can also cite Wittkower's arrangement of Sebastiano Serlio's centrally planned temples on a single page in *Architectural Principles* as well as his geometrical schema of Palladio's villas.[5] These instances show the characteristics of type as a framework for classification, comparison and description, which use historical precedent. Hence, type represents an analytic and thematic framework.

Fig. 5.2.
Fig. 5.3.
Fig. 5.4.

Yet, type in architecture is not only an instrument for classification, and a generalising framework, but is also a principle for creative production. Type is a formal principle that links analysis and design. On one hand, type reacts with the history of architecture, its forms and commonly held conventions. On the other, type, as a problem of form, and embedded with the subjectivity of the architect, their particular aesthetic and social concern. In this way, the production of types spatialise the ethos of any given culture, the shared customs, memory, and sociability, the aesthetic inclination of a people, and the common human faculty of language, of naming. We can say that it is through type that this ethos takes form. As Virno says, the "life of the mind" becomes in itself exterior and collective.[6]

We ended the last chapter by introducing Rossi's theory of type from *The Architecture of the City.* We will begin this chapter by returning to Rossi's theory of type and discuss the relationship between type as a principle for the analysis and production of architecture. We will then situate type within a longer lineage of theories since the Renaissance to the Enlightenment, the Modern Movement, and the critique of the Modern Movement in the 1970s. The illustrated architectural text will be emphasised, epitomised by those of Serlio, Palladio, Durand, and Boullée. We will discuss unbuilt examples, theoretical projects that were manifest through architectural drawing. We will concern ourselves with a discussion of buildings, as much as theories. Not all of the theories to be discussed use the word type, or typology, because the word is either replaced by a similar but different word (such as genre), or implied through the use of classification, description, and historical precedent. Therefore, it is necessary to note also the distinction between the use of the word type as a specific category in architecture, and the implicit use of the word type, conveyed by another word.

Ethos and Formal Definition in Rossi's Theory of Type

As we have discussed in the last chapter, type is as an analytical tool in Rossi's study of the city. On one hand, type provided a device for a generalising view and thematic reading of the city. So Rossi analysed the social, economic and political relations of the city, as well as the spatial formation over time, and the way individual parts of the city relate to the whole. Rossi gave us examples and described domestic economy, and the political constitution of the city. He took us to the Greek city and identified its formal distribution into buildings for the Gods and of the state, the agora, and the dwelling area, which correspond to the public and private sphere, the temples as both symbolic and secular, and open spaces. On the other hand, type for Rossi was also a problem of form, so he described the architectural dimension. Singular monuments became the concrete sign of a complex reality. A reality that was considered in its total formation as the social, economic and political relations of the city, as well as the urban form of the city. Thus, the individual building reflected the idea of the city. The Palazzo della Ragione in Padua was one such example. Built as a medieval court, its form has hardly changed during its history. Yet, throughout its history it has accommodated a range of social and political uses, and continues to function as a primary element in the life of the city. Thus Rossi critiqued functionalist doctrine through the idea of type, by explaining that any understanding of type through programme alone is limiting because buildings evolve over time and their function changes. As we know, factories and offices are abandoned and emptied. They become art galleries, artist studios, or hotels. Historical buildings are transformed into banks, fashion ateliers, and shopping malls. We work at home and live at the office. In this sense function and form are independent.

Rossi quotes Antoine Chrysostôme Quatremère de Quincy on the idea of type, whose definition in the *Le Dictionnaire Historique d'Architecture* of 1832 has become the example definition of type in architecture.[7] In Quatremère's entry on "type" he reminds us that the word derives from the Greek *typos* which expresses model, matrix, impression, mould, and figure in relief. Quatremère then brings attention to the French *type*, which he says is, "less often technical and more often metaphorical."[8] In the years before Rossi published *The Architecture of the City*, the art historian and professor at Rome, Giulio Carlo Argan had already quoted Quatremère in "On the Typology of Architecture" and provides some interesting insights. We will first turn to Quatremère, via the words of Rossi:

> The word 'type' represents not so much the image of a thing to be copied or perfectly imitated as the idea of an element that must itself serve as a rule for the model... . The model, understood in terms of the practical execution of art, is an object that must be repeated such as it is; type, on the contrary, is an object according to which one can conceive works that do not resemble one another at all. Everything is precise and given in the model; everything is more or less vague in the type. Thus we see that the imitation of types involves nothing that feelings or spirit cannot recognise... .[9]

In this passage, Quatremère rejects type as the identical copy of something, and asserts instead that type is an idea through which other works can be created. By contrast, Quatremère describes *model* and puts forward that model is something

1. Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), p. 40. Originally published in Italy by Marsilio under the title L'architettura della città, 1966.

2. Anthony Vidler, 'The Third Typology', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984* (New York: Princeton Architectural Press, 1998), p. 15. First published as the Editorial in *Oppositions* 7, 1976.

3. Rossi, *The Architecture of the City*, p. 40.

4. Nikolaus Pevsner, *A History of Building Types* (Princeton, N.J.: Princeton University Press, 1997), p. 10. First published in 1976.

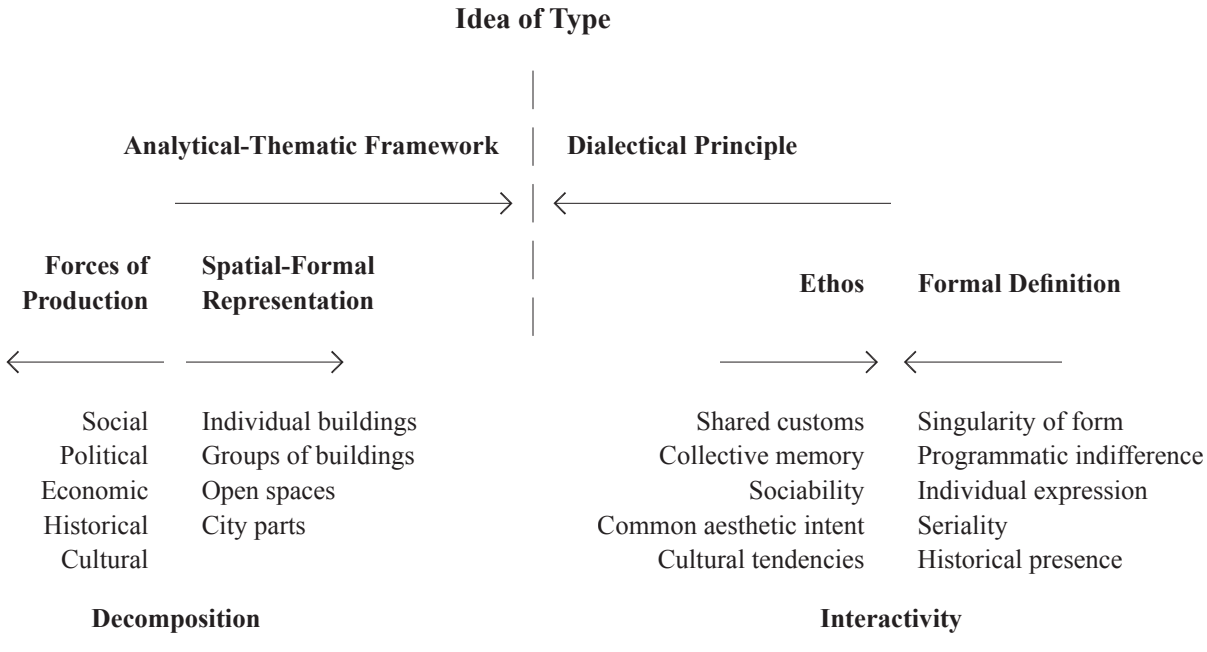
5. Rudolf Wittkower, *Architectural Principles in the Age of Humanism* (London: Academy Editions, 1973). First published in 1949. For discussion of Palladio see in particular, pp. 70-76. For Serlio, see pp. 18-19.

6. Paolo Virno, *A Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*, trans. by Isabella Bertoletti, James Cascaito, and Andrea Casson (Los Angeles, CA: Semiotext(e), 2004), pp. 36-37.

7. Antoine Chrysostôme Quatremère de Quincy, *Quatremère De Quincy's Historical Dictionary of Architecture: The True, the Fictive and the Real*, trans. by Samir Younes (Papadakis Publisher, 2000), p. 254. This is a partial translation of Quatremère de Quincy's *Le Dictionnaire Historique d'Architecture* of 1832. Subsequently cited as Quatremère de Quincy, *Historical Dictionary.* For entry on 'Type' see pp. 254-256.

8. Quatremère de Quincy, *Historical Dictionary*, p. 254.

9. The words are Quatremère's via Rossi, *The Architecture of the City*, p. 40.



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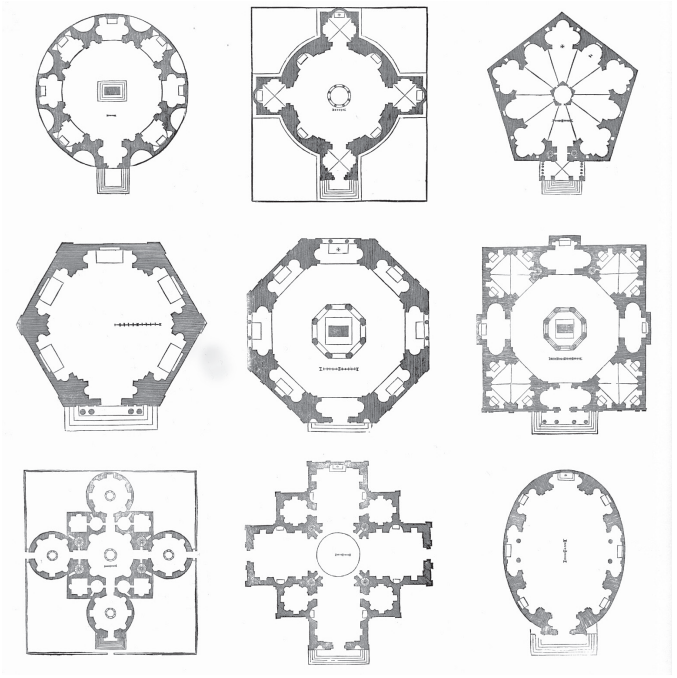

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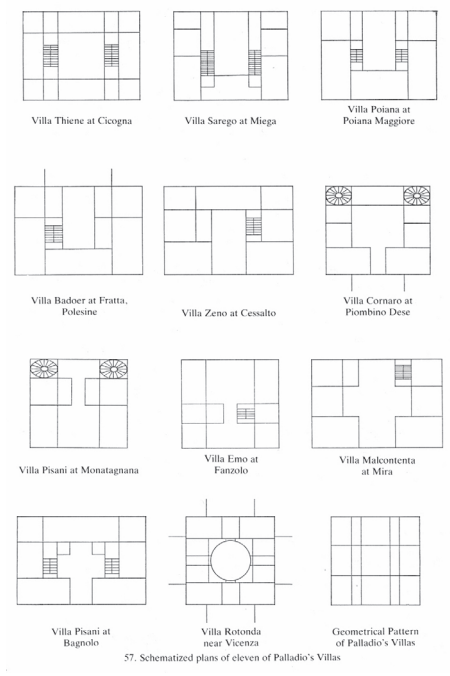

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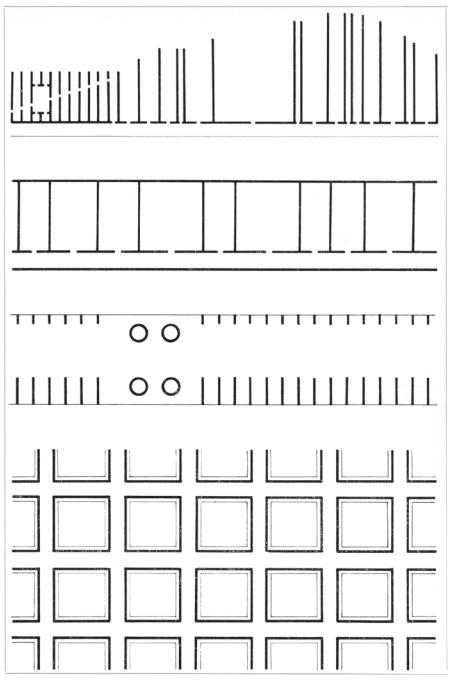


5.5.

5.1. Preliminary framework for the idea of type. On one hand type is a generalising framework to read the city by its conceptual and formal parts. On the other hand, type is a principle of design that formalises analysis and the hidden forces of the city as a singular architectural form. 5.2. Rudolf Wittkower's classification of Serlio's centralised plans, from Architectural Principles.

5.3. Nikolaus Pevsner's table of contents indicating classification by programme from the "ideal to the utilitarian."
5.4. Wittkower's geometrical schema of Palladio's villas, without their wings.
5.5. Rossi, Typological-schema, 1970. From top: exhibition plan for 13th Triennale, Milan; typical plan and ground floor plan of Gallaratese housing, Milan; grid for San Rocco housing, Monza.

Fig. 5.5.

exact and repeatable. Put another way, type is the general image we have of a work, while model is for the exact reproduction of work. Rossi quotes Quatremère once again:

> We also see that all inventions, notwithstanding subsequent changes always retain their elementary principle in a way that is clear and manifest to the senses and to reason. It is similar to a kind of nucleus around which the developments and variations of forms to which the object was susceptible gather and mesh. Therefore a thousand things of every kind have come down to us, and one of the principle tasks of science and philosophy is to seek their origins and primary causes so as to grasp their purposes. Here is what must be called 'type' in architecture, as in every other branch of human inventions and institutions. ... We have engaged in this discussion in order to render the word *type* - taken metaphorically in a great number of works - clearly comprehensible, and to show the error of those who either disregard it because it is not a model, or misrepresent it by imposing on it the rigour of a model that would imply the conditions of an identical copy.[10]

Now, Quatremère focuses on type as a search for the "origin" of things. He begins by acknowledging that all creative inventions, whether in architecture or art, retain a principle from which, variations can develop. He says that many different things have come down to us, which acknowledges first that there are different classes, and second the actuality of a *thing*. It is in this regard that Quatremère asks us to understand the idea of type in architecture as a human invention, and thus as a material entity. However, as Quatremère reiterates, type is metaphorical, so must also be taken as immaterial. We can see in this short analysis the tension between type and model, material and immaterial, singular and repeatable, general and exact. A tension always remains with type because type as typical-form is contingent with its actualisation which is by necessity specific to a given social, cultural and historical context as well as any given aesthetic will.

Let us now turn to what Argan has said about Quatremère and type. For Argan, typology refers to both the historical process of architecture in general, and also to the thinking and working processes of the individual architect. After quoting Quatremère, he writes that the type is always deduced from, "a series of instances."[11] He offers the example of a circular temple type, described as not identifiable with any one particular circular temple, but rather, "as the confrontation and fusion of all circular temples."[12] If we continue this example for a moment, it means that while the typical element of the circular temple is the circular plan, there is a confrontation with any and *all* other circular plans. We can have in mind, perhaps, the image of the Pantheon as depicted by Serlio, and a variation by Palladio, Bramante's Tempietto, and also Santa Costanza in Rome. In this short series, a number of instances are fused into a single image by formal analogy, even though each have different characteristics: the Pantheon has a portico, the Tempietto is a peripteral temple, Santa Costanza is a constituent part of a larger ensemble with outside grounds. These particular characteristics are eliminated, and in the terminology of Argan, only the "common root form" remains: the circular plan.

Fig. 5.8.
Fig. 5.9.
Fig. 5.10.
Fig. 5.11.

Two points stand out in Argan's thinking on type. First, he emphasises type as formal configuration and not functional configuration. Second, he points to three categories of type: plan configuration, structural system, and surface treatment. An example of the first would be circular planned buildings; of the second would be domed roof buildings; of the third we can refer to ornament.

It is of further note that some of the characteristics of type that Argan describes include: "formal definition," "common notions," and "heritage of images." Finally, in his concluding summary, Argan writes, "'type' must be treated as a schema of spatial articulation which has been formed in response to a totality of practical and ideological demands."[13] We can thus see in Argan a dialectic between an historical sense and formal definition. A view of type as schematic and synthetic, and linked with a common and collective heritage that responds to ideology. To put this last point another way, type is connected with the shared customs of a given people with a dominant worldview or mental conception; an ethos.

Returning to Quatremère, he writes that the formation of type depends on the, "origins of societies."[14] For Quatremère, however, this origin was not singular. Instead, he proposed that type developed like a language, everywhere and at the same time. He considered the following three different types: the cave, the tent, and the hut. These correspond with the following three different cultures: Egypt, China, and Greece. Thus for Quatremère, type depended on cultural aspects such as location, climate and human lifestyle. He assimilates it thus: the cave of Egypt is dark, heavy and massive, most suitable for the hunter; the tent of China is light and transitory and most suitable for the herdsman; the hut of Greece mediates, because it is light and heavy, can be wooden, or stone, and most suitable for the farmer.[15] This means that type develops by shared customs, and reflects the character of any given society. We can be reminded of what Rossi said: "The *type* developed according to both needs and aspirations to beauty; a particular type was associated with a form and a way of life, although its specific shape varied widely from society to society."[16] This statement refers to necessity and aesthetic will: the need to hunt, gather, farm, and the will for aesthetic expression. We should turn to another of Quatremère's keywords with a view to illuminating a little further Rossi's idea of type and its relation with the shared customs of a given people. That keyword is *character*.

The word *character* is from the Greek *characteer*, which derives from the verb *charassein*, to engrave, to imprint. It means to make a mark on material using an instrument, like a pen, brush, or chisel. With this in mind, we see a similarity to the way Quatremère introduced his definition of type, which began by observing that type was related to a material impression. However, as in his entry on type, Quatremère theorised character in two different ways. The first was *physical* character which he also connected with the *visual*. The second was *moral* character which he also connected with the *intellectual*. So Quatremère theorised character in two ways. On one hand, with the visual and physical surface appearance of any given culture. On the other hand, with the moral and intellectual structure of a people, their latent will and therefore the unseen relations that give rise to surface appearance.

Quatremère's entry on character is extensive, and involves a number of subcategories, which are diagrammed opposite. As we have said, character divides into the two general categories of "physical or visual," and "moral or intellectual." Each of these general categories are further divided into three subcategories: essential character, distinctive character, and relative character.[17] Essential character has a physical and visual sense, as well as a moral and intellectual sense, which is diagrammed in the horizontal relation. The same can be said for both distinctive and relative character. Referring to the diagram, a short statement for each horizontal relation is quoted to describe the key point. Indicated to the right of the diagram an arrow suggests the gradual particularisation of Quatremère's definition of character. When Quatremère says character is, "the distinctive sign of a particular object," we are obliged to understand that this means the physical appearance of a type, the formal definition that expresses something of the attitude and character of a given people. This leads us to a definition of character as ethos. The guiding beliefs, shared customs, and common habits of any given people, their intellectual structure, latent will and unseen relations that are spatialised within the city through the formal definition of type. This can be put forward as something close to what Rossi means by collective memory.

Fig. 5.7.

We have now seen that Rossi's idea of type has at least two crucial aspects. In the first instance, type was a framework for a thematic reading of the relationship between architecture and the city, as exemplified in *The Architecture of the City*. In the second instance, type provided a principle for describing the confrontation between collective memory as ethos, and formal definition. Type connected city and architecture, sociability and the urban artefact, and became a framework for the production of city analogues: singular architectural forms that evoked both the form of the city, and the ethos of its people.

Examples of this would be Rossi's project for the Turin *Centro Direzionale* (1962), which we have already discussed as evoking by analogy the Roman grid of Turin, and producing a singular form that would oppose the extensive urbanisation of that city. Another example would be the project for a housing block in the Gallaratese district of Milan, completed in 1973. In particular, the external corridor which evokes both the modern "internal street" and the balconied corridor of a traditional Milanese tenement. Let us consider the salient points of this important work.

Fig. 5.6.
Fig. 5.12.
Fig. 5.13.
Fig. 5.14.

10. Once again, the words are Quatremère's via Rossi, *The Architecture of the City*, p. 40.

11. Giulio Carlo Argan, 'On the Typology of Architecture' (1962), in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965-1995*, ed. by Kate Nesbitt (New York: Princeton Architectural Press, 1996), 242–246 (p. 243). First published in Italian in 1962, Joseph Rykwert translated Argan's essay in 1963 for *Architectural Design* No. 33, December 1963.

12. Argan, 'On the Typology of Architecture', p. 243.

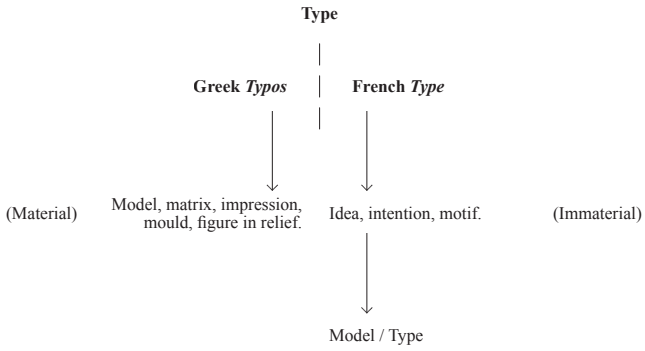
13. Ibid., pp. 245-246.

14. Quatremère de Quincy, *Historical Dictionary*, p. 255.

15. This analysis is based on Anthony Vidler, 'The "Art" of History: Monumental Aesthetics from Winckelmann to Quatremère de Quincy', *Oppositions*, 25 (1982), 52–67.

16. Rossi, *The Architecture of the City*, p. 40.

17. See Quatremère de Quincy, *Historical Dictionary*, pp. 103-111. Entry on 'Character.' Also refer Vittoria di Palma, 'Architecture, Environment and Emotion: Quatremère de Quincy and the Concept of Character', *AA Files*, 47 (2002), 45–56.



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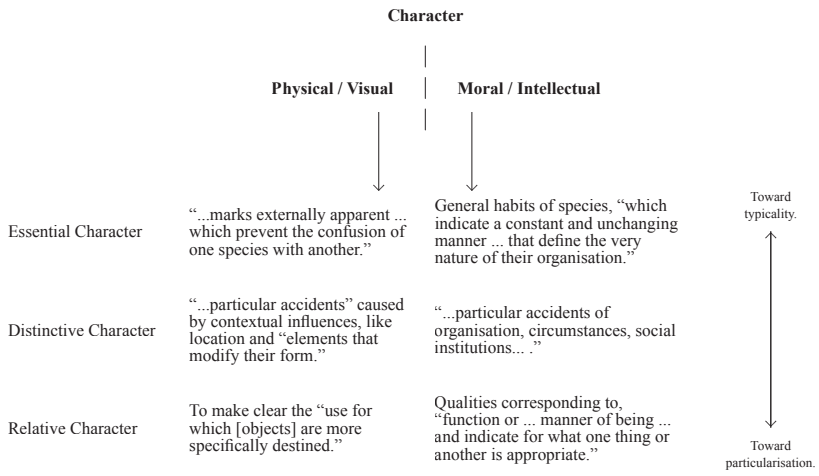

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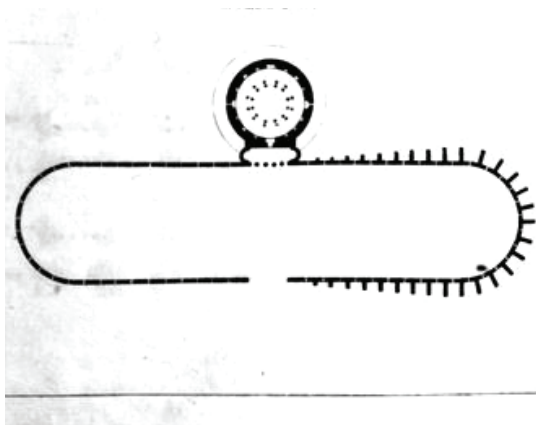

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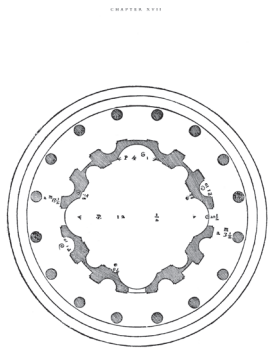

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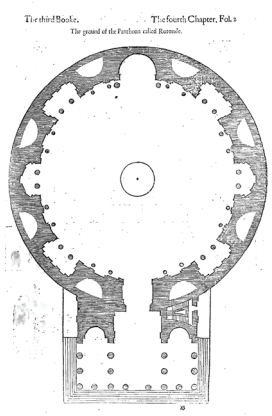

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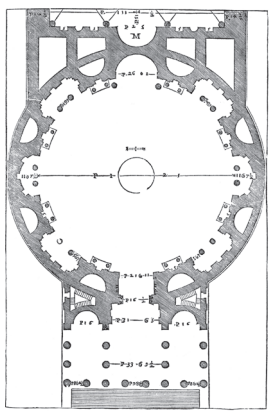

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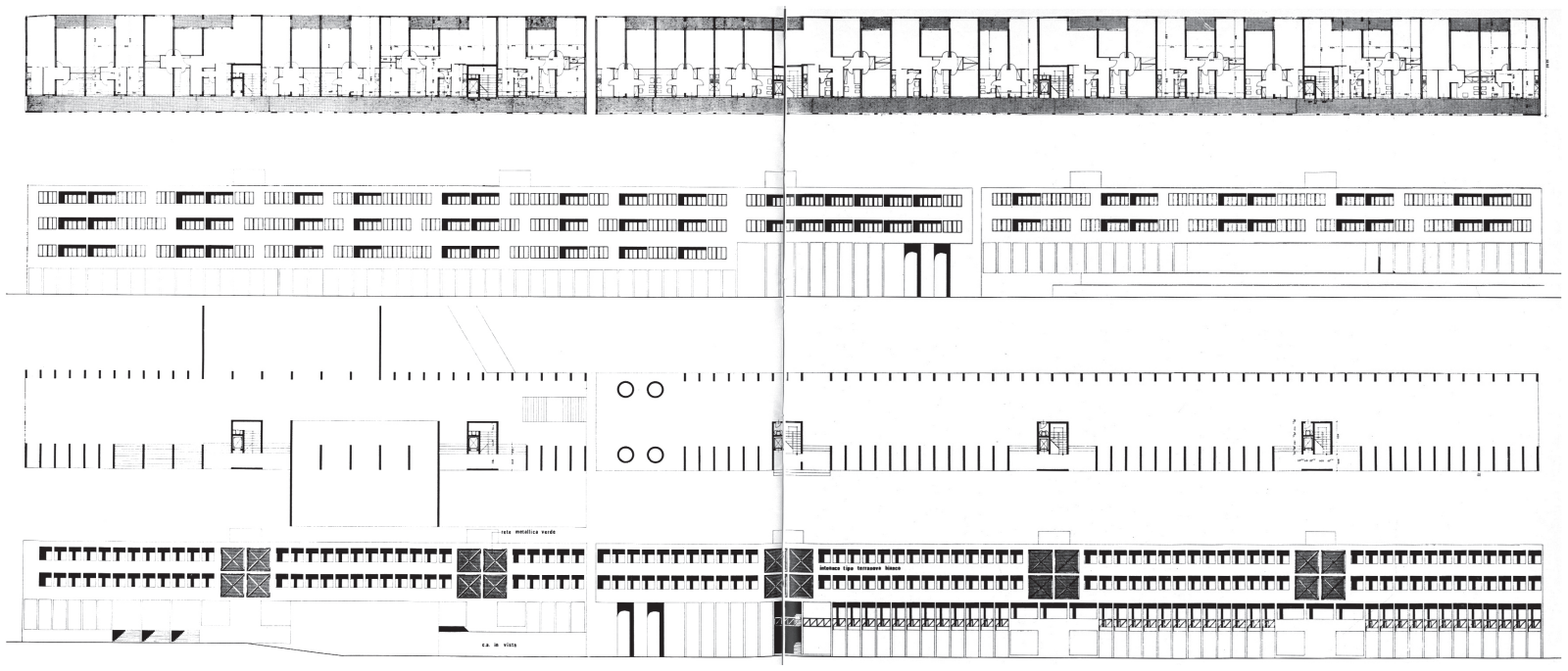

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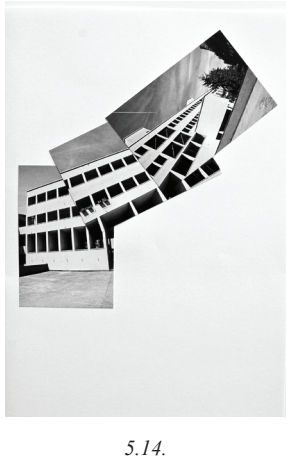

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5.6. Conceptual framework to understand Quatremère's idea of type. The dialectic between type as idea, and model as reproducible product. The confrontation of the two give rise to the type.
5.7. Conceptual framework to understand Quatremère's idea of character. The visual and physical surface appearance conditioned and conditioning the moral, intellectual and hidden relations of any given material thing. The formal appearance of the city both reflects and hides the character of any given society.
5.8-5.11. From left: Santa Costanza, Rome, 4AD. The circular mausoleum and long funerary hall, redrawn by Durand, 1801; Donato Bramante, Tempietto, 1502. Redrawn by Palladio (1570); Pantheon, Rome, c126AD, redrawn by Serlio, 1540; Pantheon, redrawn by Palladio, 1570.
5.12. Rossi, Gallaratese housing, 1970-73. From top: typical plan, garden elevation, ground floor plan, elevation to courtyard.
5.13. Rossi, "Alley of the Washerwomen," photograph.
5.14. Photomontage of Gallaratese, 2011, by author.

The building, divided after half way into two uneven parts, is made up of a two-storey colonnade of piers and columns at ground level, with a series of apartments on upper floors accessed from an outside gallery corridor, the *ballatoi*. Four oversized circular columns interrupt the piers, and articulate the gap between the two building parts. A change in level reduces the colonnade to single-storey along the shorter of the parts. On this upper part, there is space for shop units and trading areas to open into the colonnade. The apartments generally have two rooms (bedroom and living/dining) plus services, but there are larger variations. Each unit has a private loggia to the garden side, while the kitchen and bathroom windows open to the gallery corridor side.

Gallaratese was one of the first major building by Rossi to be completed (others included the town square in Segrate in 1965, and San Sabba School in Trieste in 1969), and is one part of a larger complex designed by Carlo Aymonino. Gallaratese confronts the architectural vocabulary of ancient and modern architecture, with the common formal type of a Lombard *ballatoi*. The colonnade is reinterpreted via modern *pilotis* while in the repeated units and the sharply defined overall form, we can see a dialogue with the early Rationalist modern architecture of Terragni, Hilberseimer and Meyer. Further, the raised internal street was a common architectural type in modern architecture, as for example in Le Corbusier's Marseille Unité d'Habitation (1947-52). At Gallaratese these references are mixed. As Rossi has said in the selection of the *ballatoi* type: "the corridor signifies a life-style bathed in everyday occurrences, domestic intimacy, and varied personal relationships."[18] Elsewhere Rossi reiterated the everyday character:

> ... I saw the first open windows, clothes hanging out to dry in the loggias - the first timid signs of the life it will assume when people move in. I am confident that the spaces reserved for this daily life - the big colonnade, the *ballatoi* - will bring a sharp focus to daily life and the deep popular roots of this residential architecture and of this 'big house' which would be at home anywhere along the Milanese waterway or any other Lombardian canal.[19]

Fig. 5.15.
Fig. 5.18.

During the construction of the Gallaratese housing complex, Rossi designed a school for the small town of Fagnano Olona (1972-76), north of Milan. There are formal similarities between the Gallaratese housing and the school, such as a reduced material expression, large square frameless window openings, and the flat articulation of the roof. The school is axially planned, with accommodation in wings arranged outward from a courtyard. At one end of the axis is a block with gym above a multipurpose hall. Within the courtyard is a cylindrical library and art space with glazed cupola, which sits opposite wide steps, and on axis with the entrance hall which is extruded outward. A chimney marks the entrance and the axis is further articulated with a steel pergola which stretches toward the roadside. Four of the wings contain twenty-two classrooms, of which fourteen are on the ground floor. The remaining two wings contain staff and administrative areas in one wing, and the dining hall with kitchen in the other.

As Rossi tells us, the school can be considered as a small city focused on its piazza/courtyard, in which the temple/library confronts the theatre/steps, and is surrounded by the housing/classrooms.[20] Viewing the overall plan, however, we are also reminded of the Enlightenment hospital. It is interesting to think of this fusion of city ensemble and single building, of Greek city and Enlightenment institution.

As we have already discussed, the Greek city was formed around the open agora, which spatialised the moment of common discussion and productive exchange. At the school, which Rossi has called a "theatre of life," the open space is on two levels and connects the gym that exercises the body, and the library that exercises the mind. The school at Fagnano Olona like other of Rossi's buildings, represents at the same time, a critique of the modern city as well as the Enlightenment institution, because it superimposes the idea of the city into the aesthetic and formal configuration of the institution.

The Enlightenment institution spatialised a new kind of public facility and social order. Sven-Olov Wallenstein has noted the decisive change taking place in the late eighteenth century in which architecture, "lost its traditional authority as a symbolic form, but in this process it also came to be a node in a network of knowledges and practices through which individuals were formed and a modern social space emerged."[21] What he points out is that architecture stepped away from the representation of order, of social class, and of providing dignity for the city, as was the role of architecture during the Renaissance. Instead, architecture's new role was to administer order and provide a regimental tool for the city to control its citizens. This spatialisation of power was described by Foucault in the 1970s as *biopolitics* whereby the individual was shaped simultaneously by external forces and an inner response.[22] Notions of health, hygiene, birth rate and life expectancy were inseparable from a framework of political rationality. Foucault described this as the "politics of life."[23] One example of how the biopolitical is manifest in architectural form is the hospital.

In the late eighteenth century, the doctor emerged as an authoritative public figure. At the scale of the institution, this authority was reflected in the construction of modern hospitals, in which the study of biological life could be undertaken in isolation. Patients were the object of rational analysis through separation of individuals, necessitating spatial separation at the scale of the building, so efficient circulation was important. As was the need to account for patients, so techniques for classification, communication, and surveillance evolved.[24] These characteristics are present in the building types of the period such as prisons and factories. We can think of Bentham's Panopticon, or Ledoux's Saltworks factory variations. Communication, circulation, and surveillance, eventually extended to the larger urban whole, the regional territory, through infrastructure developments, evidenced in the urbanisation of Paris by Haussmann and Barcelona by Cerdà.

Fig. 5.16.
Fig. 5.17.

In this analysis of Rossi's theory of type, we have tried to emphasise the relationship between an underlying character of a given people, and how this is expressed and formally defined by type. Let us now situate type in a wider historical lineage that extends from the Renaissance.

Language and Ornament in Renaissance Ideas of Type

In the formative years of the Renaissance, around 1400 to 1600, Europe was divided into many independent, and semi-independent city-states. With frequent political realignments and evolving social and economic conditions, new and modified building types evolved. The ruling classes built the city, and to reinforce social and political positions, architects designed buildings according to the classical language of the orders, one purpose of which was to reflect hierarchies of power. The major source of architectural ideas during the period was Italy, which revived classical learning, and an interest in the archaeology of antiquity.[25] In this context, Alberti wrote a series of texts on the arts and society, and with the rediscovery of Vitruvius' treatise on architecture *De architectura*, Alberti was provoked to write his own manuscript on architecture around 1450.[26]

Before coming to our discussion on Alberti, let us mention a few words on Vitruvius' *De architectura*. Although not the beginning of the discipline of architecture, it is Vitruvius' encyclopaedic view of architecture that we have the beginning of architecture as a form of intellectual culture with a transmittable knowledge. Written around 15 BC and dedicated to the Emperor Augustus, Vitruvius wrote ten scrolls on architecture. Ten, as a "perfect number," brings with it a geometrical symmetry: a sense of harmony, like the human body. This was represented in Vitruvius' scrolls which take the form of a triangular pediment, as reconstructed by Indra Kagis McEwen in *Vitruvius: Writing the Body of Architecture*. The triangle as one half of a square is related by analogy to the symmetry of the human figure. The human figure, and by extension, the human need for meeting and living together, of speech, and the creation of shelter, was for Vitruvius at the core of civilisation.[27]

Fig. 5.19.
Fig. 5.20.

The overall strategy of Vitruvius' ten books began with an understanding of the principles and layout of the city, which as we have seen, is the basis of

18. Aldo Rossi, 'An Analogical Architecture', *A+U: Architecture and Urbanism*, trans. by David Stewart, 65 (1976), 74–76 (p. 74).

19. Aldo Rossi, *Aldo Rossi: Buildings and Projects*, ed. by Peter Arnell and Ted Bickford, (New York: Rizzoli, 1987), p. 75.

20. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), p. 55.

21. Sven-Olov Wallenstein, Biopolitics and the Emergence of Modern Architecture (New York: Princeton Architectural Press, 2013), p. 14-15. First published in 2008.

22. See Michel Foucault, 'The Birth of Biopolitics', in *The Essential Works of Michel Foucault, 1954-1984: Ethics, Subjectivity and Truth Vol. 1*, ed. by Paul Rabinow, trans. by Robert Hurley *et al*. (New York: The New Press, 1997). Also refer Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979*, ed. by Michel Senellart, trans. by Graham Burchell (Basingstoke: Palgrave, 2008).

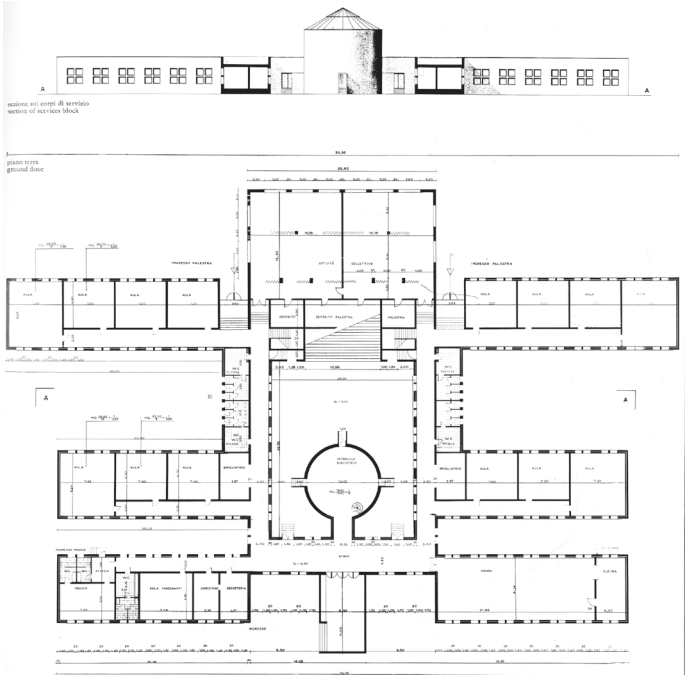
23. Foucault, 'The Birth of Biopolitics', in *The Essential Works of Michel Foucault, 1954-1984: Ethics, Subjectivity and Truth Vol. 1*, pp. 73–79.

24. See the discussion in Wallenstein, *Biopolitics and the Emergence of Modern Architecture* (New York: Princeton Architectural Press, 2013).

25. For contextual discussion see Manfredo Tafuri, *Venice and the Renaissance*, trans. by Jessica Levine (Cambridge, Mass.: MIT Press, 1995); Manfredo Tafuri, *Interpreting the Renaissance: Princes, Cities, Architects*, trans. by Daniel Sherer (Cambridge, Mass.: MIT Press, 2006).

26. See Leon Battista Alberti, *On Painting and On Sculpture*, trans. by Cecil Grayson (London: Phaidon, 1972). From *De Pictura* (1432) and *De Statua* (1435); Leon Battista Alberti, *De re aedificatoria*, trans. by Joseph Rykwert, Robert Tavernor, and Neil Leach (Cambridge, Mass.: MIT Press, 1988). First published in 1485; Leon Battista Alberti, *The Family in Renaissance Florence*, trans. by Renée Neu Watkins (Long Grove, IL: Waveland Press, 2004). From *Della Famiglia*, 1433-41.

27. See Book One in Vitruvius, *Vitruvius Ten Books on Architecture*, trans. by Ingrid D. Rowland (Cambridge; New York: Cambridge University Press, 1999). Written c15BC.



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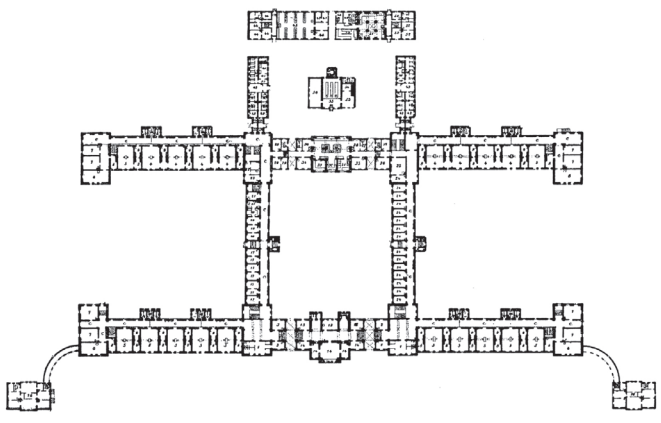

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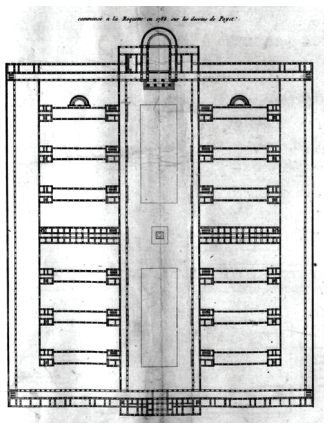

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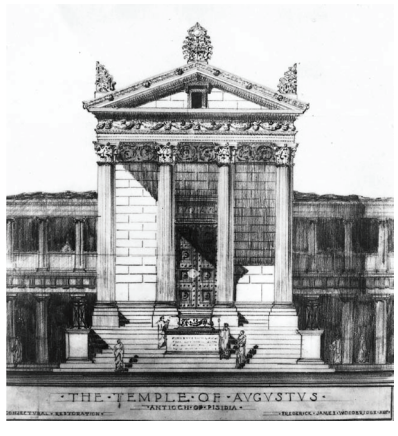

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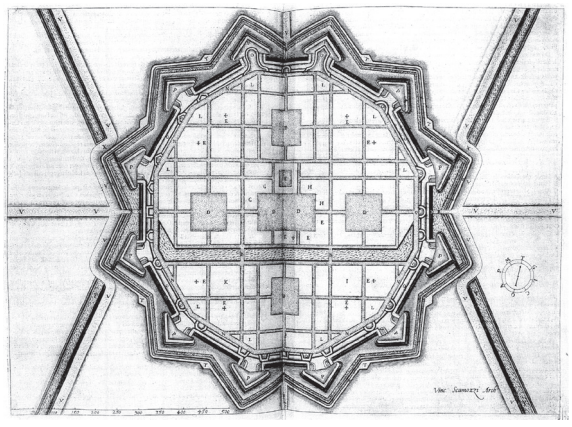

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5.15. Rossi, Fagnano Olona School, 1972-79. Cross section and ground floor plan showing the wings stretching outward from the courtyard.
5.16. City Hospital, Kobenhavn. Ground floor plan.
5.17. Bernard Poyet, Pavilion-type hospital, 1788. Ground floor plan redrawn by Durand, 1801.
5.18. Fagnano Olona courtyard, photograph, 2011, by author.
5.19. Vitruvius, Ten Scrolls of De architectura, c15BC. Reconstruction with plaster, wood, and surgical gauze, by Indra Kagis McEwen.
5.20. Temple of Augustus in Pisidian Antioch, built c2BC. The form and representation of the Ten Scrolls connote the pediment form of the temple.
5.21. Vincenzo Scamozzi, Plan of an Ideal City, 1615. Possibly the plan for Palmanova, Udine.

civilisation. Next Vitruvius discussed building materials in *Book Two*. In *Book Three* and *Four*, Vitruvius discussed temples and how the Corinthian, Doric, and Tuscan Orders relate to temples. *Book Five* and *Six* are on public then private buildings respectively. *Book Seven* is on ornament. *Book Eight* on water. *Book Nine* on sundials and clocks. Lastly, *Book Ten* was on military machines.

Vitruvius set out to provide a systematic study of architecture and in doing so put forward architecture as a form of knowledge, with a discernible order, structure, and disciplinary specific language. Therefore, the need for theoretical vocabulary. Terms put forward include: *ordinatio* (for ordering, planning), *dispositio* (for projection), *eurythmia* (for harmony), *symmetria* (for modularity, commensurability), *decorum* (for appropriateness, to follow conventions), and *distributio* (for distribution).[28] The category of *decorum* is also for the value of civil tradition in general and was emphasised by Alberti in his own treatise.

In the prologue to *De re aedificatoria*, Alberti insists that the, "safety, authority, and decorum of the State depend to a great extent on the work of the architect."[29] Here, Alberti points to the analogical relationship between architect, architecture and the city, because as he writes later, the architect's erudition, is testified in the dignity of the work and as an expression of civilised values.[30] *De re aedificatoria* itself, like Vitruvius' *De architectura*, is divided into ten books, but can be said to form two dialectical halves. The first five books consider the formal structure of the city, its building types, and their design and construction. The organisation is thus: Book One: *Lineaments*, Book Two: *Materials*, Book Three: *Construction*, Book Four: *Public Works*, Book Five: *Works of Individuals*. Rykwert has said that Alberti was inclined to stop here.[31] However, Alberti carried on, and the second five books turn to the value system of the Renaissance city, and how this attitude is manifest in public and private buildings. Alberti gave these ideas the category of ornament, with each of the books titled thus: Book Six: *Ornament*, Book Seven: *Ornament to Sacred Buildings*, Book Eight: *Ornament to Public Secular Buildings*, Book Nine: *Ornament to Private Buildings*, Book Ten: *Restoration of Buildings*. Ornament contributed to the representation of social class structures, and at the same time ornament was to bring dignity to the building, the patron and the city. So the idea of ornament is not only the application of decoration, but visualises social relations. For Borsi, Alberti's *De re aedificatoria* was an attempt to link architecture with politics and the "morality" of the city.[32]

Concurrently, the invention of the printing press in Germany during the period of *De re aedificatoria* allowed Alberti to produce a printed edition in 1485, and to disseminate his work to a wide audience.[33] The coupling of the printing press with woodcut and copperplate engraving techniques provided architects with the means to visually transmit their ideas. We can see this in the illustrated architectural treatise of, for instance, Serlio (1537), Vignola (1562), and Palladio (1570) amongst others.[34]

Mario Carpo has described this as a paradigmatic period in architecture, when architecture was distinguished from the practice of building.[35] The architect now composes a building in the mind, produces a drawing as an instruction to be built by someone else. As Alberti said, form is conceived in the mind, expressed in the drawing, and built by others. Alberti considered the drawing itself as architecture and the building as an analogue of the drawing. He wrote the following in *De re aedificatoria*:

> It is quite possible to project whole forms in the mind without any recourse to the material, by designating and determining a fixed orientation and conjunction for the various lines and angles. Since that is the case, let lineaments be the precise and correct outline, conceived in the mind, made up of lines and angles, and perfected in the learned intellect and imagination.[36]

This is by contrast with the Medieval master-builder who did no prior design, but built through collective effort with crafts-people on site. Hence the organisation of labour on the construction site was redefined so the architect, whose work is to design then instruct – by contrast with the master-builder who designs and builds – is consequently absent from the construction site. We can say that from this point on the modes of architectural representation, the methods of writing, visualisation and notation, have been significant in the production of architecture as a form of knowledge.

The development of the Renaissance city was linked to both military needs and general civility. With the advent of gunpowder artillery and the cannon ball, the walled Medieval defences were made obsolete. New planning proposed low walls with arrow shaped ramparts to provide both offensive capability and defensive coverage. Architectural treatise helped to distribute examples, such as those by Filarete (c1460) and Scamozzi (1615) across Europe. Palmanova (c1590) in the Veneto/Udine border is a built example of a new city, and based on the central plan and radial street system. In existing cities, similar geometrical principles were applied in the widening and straightening of streets for reasons such as hygiene, military control, increased use of wheeled transport, and representation of power. The development of the city gave rise to housing needs, which led to speculative building and to class division. *Fig. 5.21.*

In *De re aedificatoria*, Alberti was conscious of this division. He described the city in terms of both its urban and its social structure, correlating the two systems. Summarising this line of thinking, Alberti wrote:

> Some buildings are appropriate for society as a whole, others for the foremost citizens, and yet others for common people. Then again, among the foremost citizens those presiding over domestic councils require different buildings to those involved in executing decisions or those engaged in accumulating wealth.[37]

These words are from Book Four, on *Public Works* which is the first extended discussion on the idea of type conceptualised as the classification of building types, as the next few statements outline. Alberti comments that some buildings are, "for life's necessities, others offer themselves for practical requirements, while still others are for occasions of pleasure."[38] Then: "If we wish to give an accurate account of the various types of buildings (as was our intention) and of their constituent elements, our whole method of investigation must open and begin here... ."[39]

While Vitruvius considered the origin of architecture as related to the elements of fire and water around which man could gather, Alberti considered the material importance of "roof and walls." Thus, Alberti puts forward the concrete needs and material reality of man's existence. What links Vitruvius and Alberti is that both searched for a language to discuss architecture. A conceptual vocabulary. In another passage of his treatise, Alberti organises the city according to practical, functional, and hygienic ends. He writes that jewellers, painters and silversmiths should be around the forum, tailors farther off, tanners on the outskirts, residential areas of the "gentry," somewhere free of the "common."[40] There is a clear division of society in this, and it is worth considering how these matters of distribution and class became actualised in urban types.

The Palazzo Rucellai (1446-1451) in Florence is an example of Alberti's thinking at the urban scale. As an existing building, Alberti was tasked with the design of the façade only, so the building is an interesting example for considering his ideas on the concept of ornament. "Beauty" for Alberti, was the harmony of the parts to the whole, "so that nothing may be added, taken away, or altered, but for the worse."[41] Ornament was an improvement to beauty, a complement. While beauty is something suffused throughout the whole, ornament is something additional, providing character to the building. Put another way, ornament was a rhetorical device. Ornament said something about the individual patron whom commissioned the particular building, reflecting the class of the patron and contributing to the character of the city. Ornament, therefore, provided a way to bring dignity to the city, as the backdrop for city life. *Fig. 5.22.* *Fig. 5.23.*

For Alberti, the principle ornament was the column. Serving the purpose of ornament, the column was no longer structurally engaged. This opened a gap between classical architecture of Greece, in which the column served both as ornament and structure. Wittkower has explained that in order to harmonise classical Greek and Roman architecture, Alberti used the pilaster instead of the column. The transformation of the structurally engaged column

28. Ibid., See Books Three and Four.

29. Alberti, *De re aedificatoria*, p. 8.

30. Ibid., pp. 318-319.

31. Joseph Rykwert, 'Introduction', in *De re aedificatoria* (Cambridge, Mass.: MIT Press, 1988), ix–xxi (p. xvii).

32. Franco Borsi, *Leon Battista Alberti: The Complete Works* (New-York: Electa : Rizzoli, 1989), p. 221.

33. For an extensive discussion, see Mario Carpo, *Architecture in the Age of Printing: Orality, Writing, Typography, and Printed Images in the History of Architectural Theory*, trans. by Sarah Benson (Cambridge, Mass: MIT Press, 2001).

34. See for example Andrea Palladio, *The Four Books on Architecture*, trans. by Richard Schofield and Robert Tavernor (Cambridge, Mass.: MIT Press, 2002); Sebastiano Serlio, *Sebastiano Serlio on Architecture: Books I-V of 'Tutte l'Opere d'Architettura et Prospetiva'*, trans. by Vaughan Hart and Peter Hicks (New Haven, Conn.: Yale University Press, 1996); Giacomo Barozzi da Vignola, *Canon Of The Five Orders Of Architecture*, trans. by John Leeke (Mineola, N.Y.: Dover Publications, 2011).

35. Mario Carpo, *The Alphabet and the Algorithm* (Cambridge, Mass.: MIT Press, 2011). See in particular Carpo's discussion of authorship and architectural notation, pp. 12-25. Also see pp. 44-48 for "Alberti's Paradigm."

36. Alberti, *De re aedificatoria*, p. 7.

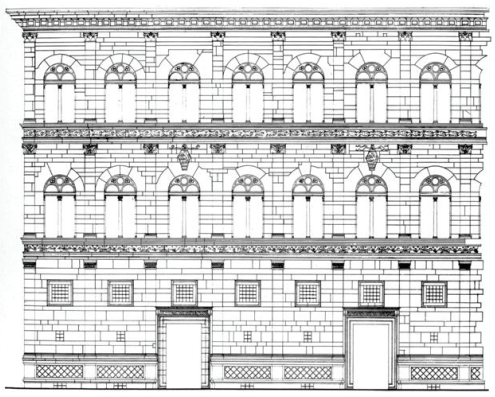
37. Alberti, *De re aedificatoria*, p. 94.

38. Ibid., p. 92.

39. Ibid., p. 92.

40. Ibid., p. 192.

41. Ibid., p. 156.



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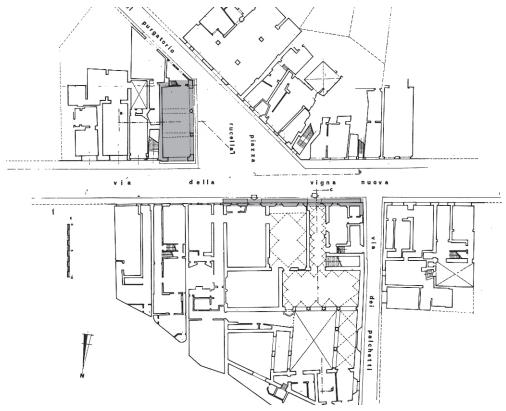

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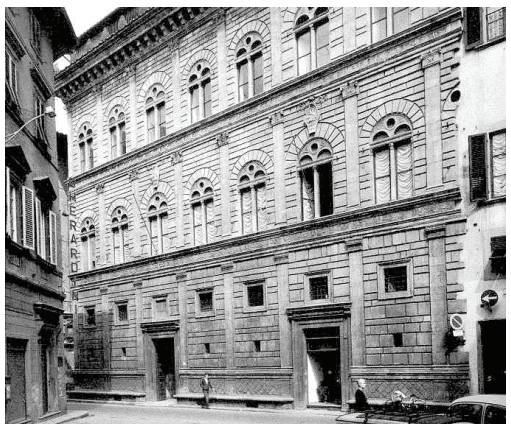

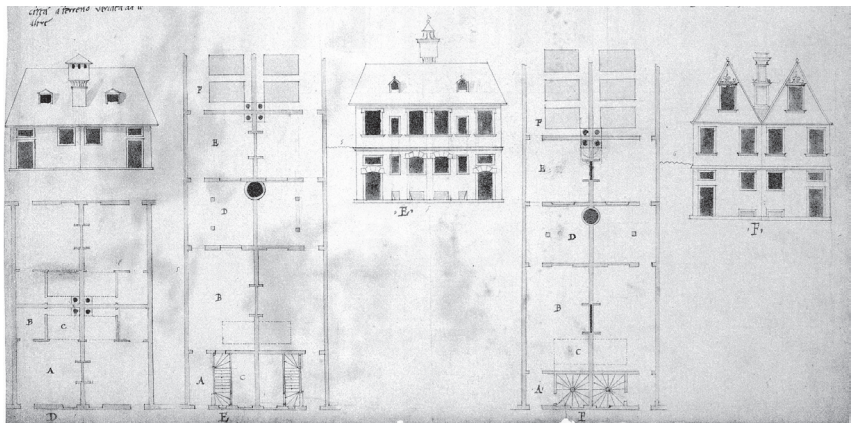

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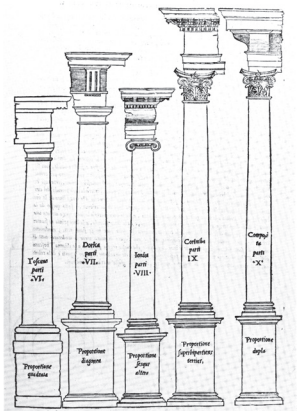

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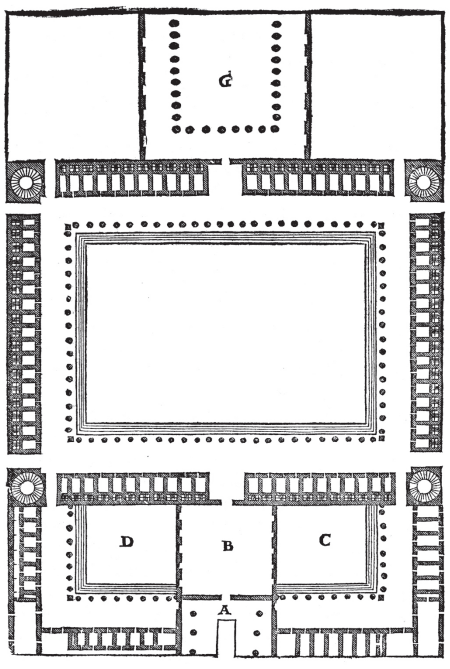

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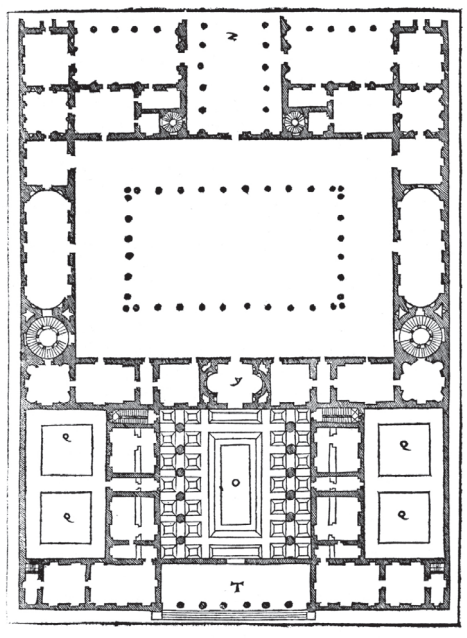

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5.22-5.23. Leon Battista Alberti, Palazzo Rucellai façade and Loggia, Florence, c1450-1470. Grid of superimposed orders embedded within the façade, intentionally "unfinished" as the elevation connects to the adjacent building.
5.24. Serlio, City Dwellings for a Poor Artisan and a Better-off Artisan. Serlio put forward a theory of architecture that considered the poor as well as the patron class.
5.25. Serlio, The orders of architecture, 1540. Tuscan, Doric, Ionic, Corinthian, and Composite, canonically drawn together for the first time by Serlio.
5.26. Plan of Forum, drawn by Palladio for Barbaro's Vitruvius. The analogical relationship between house and city room. Shops surround the open urban space that is defined by both a colonnade and steps.
5.27. Plan of a Roman Palazzo, drawn by Palladio for Barbaro's Vitruvius. Note the sequence of loggia entrance at the bottom, opening into an atrium hall, then open courtyard, surrounded by the enfilades of rooms.

to disengaged pilaster is explained as a "flattened column" which translated classical architecture – the language of wall and entablature – into Renaissance *wall architecture*.[42]

The Palazzo Rucellai façade is a test case. Composed of a superimposed pilaster order of Doric/Ionic/Corinthian, and horizontally articulated with two doorways on the main street elevation, and seven window openings, the façade becomes a grid because of the equality of bays and storeys. A ledge runs the full extent of the building, broken only for the doorways. An interesting terminating edge of the elevation intentionally removes the stonework endpieces. In doing so Alberti proposes that the façade can be extended along the rest of the street, and so Alberti's grid of superimposed orders could be applied as ornament at an urban scale throughout the city. As a counterpoint to the flatness of Alberti's façade, the loggia he designed opposite, is also for the Rucellai family. It regularises the meeting of a number of streets, and absorbs urban public life into the quasi-private realm of the loggia entrance.

Alberti, whom seemingly always had the dominant class in mind, did not illustrate *De re aedificatoria* preferring the written word to the image, and writing in Latin, and not Italian dialect. In so doing he presented his treatise specifically to the learned class. By contrast, Serlio proposed, "houses for the poor," as well as others in his *Sesto Libro*, the sixth of his seven books on architecture. Serlio gave a central role to images, drawing his building types. Tafuri has recognised the historical significance of what he calls Serlio's "typological inventions."[43] The page itself is treated like a canvas, upon which drawings, and words are montaged. Plans, elevations, and perspectives are mixed, and the various drawings positioned on the page are often at different scales. By using images, Serlio speaks to other architects, and not primarily to patrons.

Fig. 5.24.

Serlio's seven books were published at different times and out of sequence. Book One and Two discuss the elements and conventions of drawing, titled: *On Geometry* (1545), and *On Perspective* (1545). It is interesting to note that Serlio begins with the grid, which has become the meta-compositional apparatus for design in architecture. Book Three, catalogues buildings from Rome in plans, elevations and perspectives, titled *On Antiquities* (1540). Book Four is on the five orders, titled *On the Five Styles of Buildings* (1537), in which Serlio is the first to draw the Tuscan, Doric, Ionic, Corinthian, and Composite orders together. Book Five describes the typological-form of temples, *On Temples* (1547): circular, square, six-sided, eight-sided, oval and cruciform. Book Six is on types of housing, *On Habitations* (1547), which Serlio organises as "Country Dwellings," and "City Dwellings," then by class. For instance, the farmhouse is a country dwelling type, and designed for either the "poor citizen," the "middle class citizen," or the "rich citizen." An example of the city dwelling type is the palazzo, for a "captain," "official," or "governor." Finally, Book Seven deals with the irregularities of the site, *On Situations* (1575).[44]

Fig. 5.25.

We can note here one of the dominant urban types of the Renaissance city as the palazzo, which was always a sign of the power of a patron. Its typological form and distribution usually a three-storey block with central colonnaded courtyard, ground floor loggia, and interconnected rooms of diminishing size, without corridors. Programmatically, apartments were on the first floor, with shops on the ground floor, and smaller rooms on the top floor to house children's rooms and servant's quarters. Palazzi varied in scale and by the seventeenth-century had expanded to include larger service areas and stables.

Fig. 5.26.
Fig. 5.27.

In Palladio's *Quattro Libri* palazzi take up the most part of *Book Two*. The books are organised, starting with *Book One*, on the five orders of Tuscan, Doric, Ionic, Corinthian, Composite, and includes a discussion on the parts of buildings: loggias, staircases, windows and doors. Book Two is on Greek and Roman private buildings, as well as Palladio's own villas and palazzi. Then in *Book Three*, public buildings and the city are discussed. In *Book Four*, Palladio finishes with drawings of ancient buildings of historical significance, like temples in Rome. It thus proceeds from elements to dwellings, to the major works of the city in history. Tavernor and Wittkower have indicated that Palladio was preparing further books.[45] One that would deal with baths, bridges, towers, and other public buildings, but was unpublished. Tavernor also points out that Palladio includes building types such as: theatres, amphitheatres, arches, and tombs, which Tavernor speculates could have become Palladio's own *Ten Books*, like Vitruvius and Alberti. If presented in this way, Palladio would have compiled the major building types of the Renaissance city.

Tavernor has noted that Serlio made a great impression on Palladio, and it is interesting that while Serlio made drawings of antiquity he left them as ruins, as in the drawing of the Pantheon earlier.[46] When Palladio made drawings of the ancient monuments, they were re-drawn in his own treatise as entire buildings and as they were originally intended. He did this with his own buildings as well, redrawing them as he had intended. Remembering that Palladio's treatise was published at the end of his career, the drawings depict an ideal image, and not the built image. Two examples of this can be seen in the projects for Palazzo Thiene and Palazzo Porto, both in Vicenza, and both differ in their representation in the *Quattro Libri*, and in built actuality. The Palazzo Porto for instance is drawn in the *Quattro Libri* it appears as three overlapping squares in an elongated plan. Essentially two identical blocks divided by a central courtyard. Each block distinguishing between the residence and the guest accommodation, but it was only part built. Apart from the simplicity of the plan, Wittkower notes the importance given to the courtyard, which has a giant composite colonnade, and articulated with a staircase. This can be understood as the courtyard of the house, where everything comes together like the forum of the city. Palladio takes the idea of the forum colonnade and applies it to the portico of courtyard. As Palladio has said, "Porticoes should be arranged around squares, as the ancients did, which are as broad as the columns are long."[47]

Fig. 5.28.
Fig. 5.29.

We have considered type as the general classification of buildings and parts of buildings, and the relation of type to buildings in the city. For example, the classification of Alberti's books went from the city to the building and how the building takes expression in the city. The key characteristic of the Renaissance city was the significance of representation, through the idea of ornament. It is through ornament related to the classical language of the orders, that architecture can be conceptualised as having a specific syntax that constructed a dialogue with the architecture of antiquity, with the city, and with the social condition. If we consider the idea of type as the language of architecture, then we understand the language of the orders as contributing to the Renaissance idea of type. However, type was not conceptualised like this in the Renaissance treatise, but implied. We will now turn to the Enlightenment when the idea of type was theorised to a fuller extent.

Order and the Revolutionary Element in Enlightenment Ideas of Type

In the period after the Renaissance, Europe experienced a centralisation of power and cities such as Rome, Berlin, Paris, and London had imperial ambitions. Hobsbawm, writing of the period between 1789 and 1848, described the significance of the "dual revolutions" of the Industrial Revolution and French Revolution.[48] The latter in 1789-1793 when the monarchy of France was overthrown, King Louis XVI was executed, and soon after General Napoléon Bonaparte took power until 1815. At its zenith, the Napoléonic Empire comprised France, Belgium, the Netherlands, and parts of Germany and Italy. With the rise of societal ideals such as liberty, fraternity, and equality, the classical language of the orders, which were used to reflect hierarchies of power, were theorised to a lesser degree in the architectural texts of the period. Industrial change such as the growth of communication networks like rivers as channels of trade, canals in certain countries, and the rise of railways, was notable. An increased birth rate and reduction of infant mortality contributed to population growth, with Europe expanding from around 180 million in 1800 to around 400 million by 1900.[49] By the middle 1870s, Berlin, London, Paris, and Vienna had a population of over one million.[50] To accommodate this rise in population new districts of housing were built. The industrial worker was housed in tenements, usually developed by factory bosses close to places of work, but with poor ventilation, light, and sanitation. The bourgeoisie, sustained by trade, banking, law, and government, resided in more affluent districts. Factories, theatres, libraries, and museums were the sign of this urban development. Although social, political and economic events determine the production of architecture, the history of ideas is of equal value. So it is interesting to note the publication of Ildefons Cerdà's *Teoría General de la Urbanización*, ("*General Theory of Urbanisation*") in 1867 and the publication by coincidence during the same year of Karl Marx's

42. Wittkower, *Architectural Principles in the Age of Humanism*, pp. 33-37.

43. Tafuri, *Venice and the Renaissance*, p. 68.

44. See Sebastiano Serlio, *Sebastiano Serlio on Architecture: Books I-V of 'Tutte l'Opere d'Architettura et Prospetiva'*, trans. by Vaughan Hart and Peter Hicks (New Haven, Conn: Yale University Press, 1996); Sebastiano Serlio, *Sebastiano Serlio on Architecture: Books VI and VII of 'Tutte l'Opere d'Architettura et Prospetiva' with 'Castrametation of the Romans' and the Extraordinary Book of Doors*, ed. by Vaughan Hart and Peter Hicks (New Haven: Yale Univ. Press, 2001). Serlio composed his treatise in seven books published separately between 1537 and 1575.

45. Wittkower, *Architectural Principles in the Age of Humanism*, pp. 64-65.

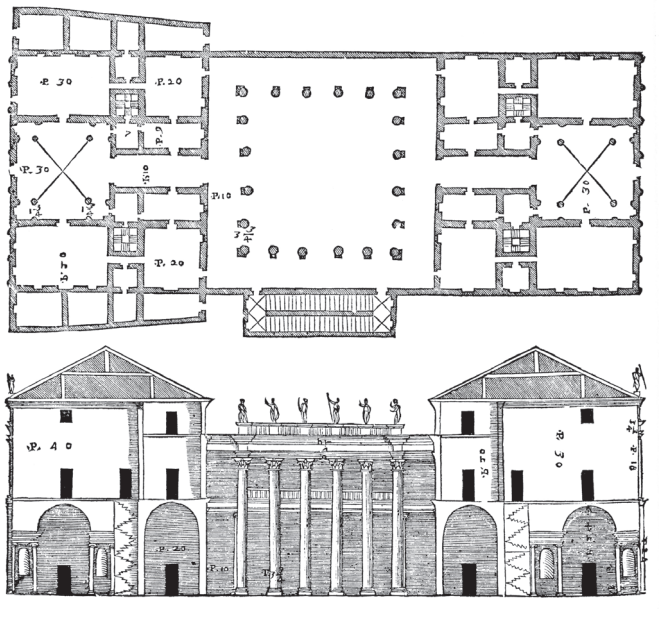
46. See Tavernor's Introduction in Andrea Palladio, *The Four Books on Architecture*, trans. by Richard Schofield and Robert Tavernor (Cambridge, Mass.: MIT Press, 2002), p. x.

47. Palladio, *The Four Books on Architecture*, p. 193.

48. See Eric J. Hobsbawm, *The Age Of Revolution, 1789-1848* (London: Abacus, 1986). First published in 1962.

49. These statistics can be found in Banister Fletcher, *Sir Banister Fletcher's A History of Architecture*, ed. by Dan Cruickshank and others, 20th edn (Oxford; Boston: Architectural Press, 1996), p. 828.

50. Eric J. Hobsbawm, *The Age of Capital, 1848-1875* (London: Weidenfeld & Nicolson, 1995), pp. 210-211. First published in 1962.



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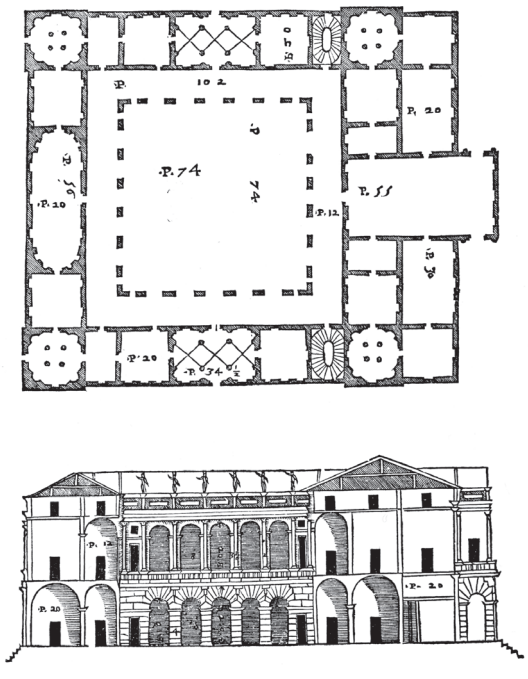

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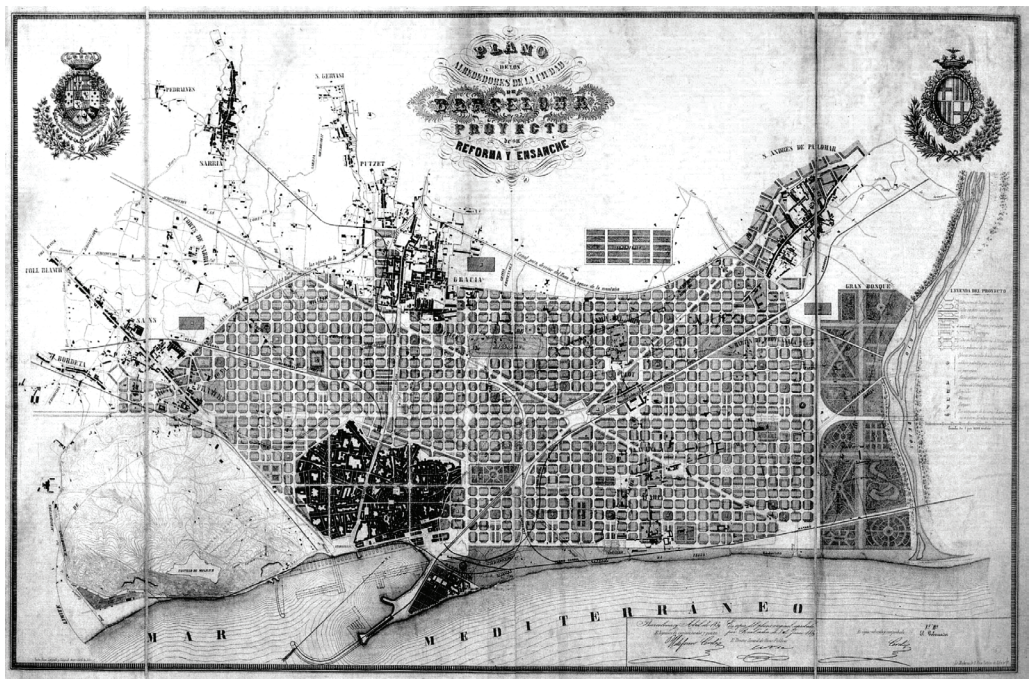

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5.31.

5.28. Palladio, Palazzo Porto, Vicenza, c1550 (unfinished). Two self-same volumes defined the central courtyard, lined with a columned loggia.
5.29. Palladio, Palazzo Thiene, Vicenza, c1542. Continuous rooms surround the courtyard lined with loggias of piers. Rossi montages the plan of Palazzo Thiene into his collage panel Analogical City in 1976.
5.30. Ildefons Cerdà, Extension of Barcelona, 1859. The urb replaces the city, and Cerdà puts forward his theory of urbanisation in 1867.
5.31. Marc-Antoine Laugier, The primitive hut, 1753. The engaged structural column was put forward as the first expression of architecture, represented by "nature."

Capital: Critique of Political Economy.[51] With the advent of industrialisation, the increase of private property, and as Hobsbawm has said, the first world wide era of urban real-estate, urbanisation refers to the extension of the city, brought about by the increased circulation of people, goods and capital.[52] Urbanisation is thus one of the first clear instances of the spatialisation of capital.

Fig. 5.30.

Vidler defined the Enlightenment as the first crucial period in the history of type, in which type was theorised as a rational justification for the production of architecture.[53] In "The Third Typology," Vidler cites Marc-Antoine Laugier who linked type with the idea of nature:

> All the splendors of architecture ever conceived have been modeled on the little rustic hut... . It is by approaching the simplicity of this first model that fundamental mistakes are avoided and true perfection is achieved. The pieces of wood set upright have given us the idea of the column, the pieces placed horizontally on top of them the idea of the entablature, the inclining pieces forming the roof the idea of the pediment.[54]

As this statement makes clear, Laugier emphasises type as "idea." His rustic hut, the *cabane* has been called a, "symbolic diagram" by John Summerson, a product of the imagination, a principle for the "essence" of architecture.[55] It stands for the idea that architecture imitates nature. Put forward in the chapter "General Principles of Architecture" in Laugier's 1753 *Essai sur l'architecture*, the *Essay on Architecture* in which he tells us the story of primitive man seeking shelter and building out of necessity a hut, which became the basis for all architecture. Represented in the frontispiece image of Laugier's *Essai* the hut is depicted as four trees within a perfect square, representing the first columns. The branches laid horizontal represent the first entablature. The boughs bent into a triangle represent the first pediment. Imitating nature the so called "first principles" of architecture are thus the column, entablature and pediment, from which, man produced the hut. Laugier extrapolated his idea of the hut as a type, to the forest of types as the city, declaring:

Fig. 5.31.

> Whoever knows how to design a park well will have no difficulty in tracing the plan for the building of the city according to its given area and situation. There must be squares, crossroads and streets. There must be regularity and fantasy, relationships and oppositions, and casual unexpected elements that vary the scene; great order in the details, confusion, uproar, and tumult in the whole.[56]

Laugier's hut was a product of man who imitates the *idea* of nature. He held the Maison Carrée, an ancient Roman temple in Nîmes, as an example. Rectangular in plan, thirty columns support a deep entablature and roof closed at both ends by a pediment. It is interesting to remember that Laugier and Quatremère differed in their definition of type. Laugier considered only one type in architecture, while Quatremère considered three types. However, Quatremère showed his debt to Laugier by including an entry to the *cabane* in his *Le Dictionnaire Historique d'Architecture*. Let us also remember that Laugier did not mention the word "type," and used "cabane" instead. Furthermore, Laugier's idea of type was not a desire to live close to nature, nor for a transcendental architecture (although this is certainly implied), but an argument that defined a set of rules from which any number of other architectural types may be developed, and eventually actualised in architectural form. While Laugier was not an architect, he advocated the use of geometrical forms, as Kaufmann has noted, and the expression of "atmosphere."[57] This thinking can be followed in the work of Boullée, to whom we will turn in a moment. However, let us make a brief detour to Rome, with Piranesi, who took the opposition of regularity and fantasy to an extreme, and in doing so removed Laugier's implied picturesque.

In his *Carceri* series of 1745, Piranesi depicts the prison as vast in scale, crammed with objects. We see poles, ropes, chains, beams, ladders, apparatuses of torture, all composed in contrasting directions, with viaducts in the background, the scene rendered sharply in light and shadow. The *Carceri* etchings are amongst Piranesi's earliest work and can be viewed as a decisive break from the Baroque ideas of hierarchic order, and controlled variety, to what appears as a chaotic assemblage. However, the etchings can also be viewed as representing Piranesi's disquiet at the Enlightenment period which was in transition from the Baroque. Viewed in relation to Piranesi's *Campo Marzio* project of 1762, the *Carceri* also represent a prefatory study before a larger project. The *Campo Marzio* a, "colossal piece of *bricolage*," as Tafuri has called it in *Architecture and Utopia*, was a counter project to Nolli's plan of Rome.[58]

Fig. 5.32.

Fig. 5.33.

While for Laugier, the crucial element of the hut as a type, is the column, for Piranesi the crucial typological element is the wall. In Piranesi's work the wall is taxonomic so includes all forms of enclosure: foundations, colonnades, gates, fortifications, and aqueducts, which he monumentalises in various etchings. The *Campo Marzio* is the name of the area in the west of Rome around what today we know as the Vatican City, and which in the period around 400 AD was considered a public part of Rome, with legislation that prohibited the construction of private dwellings.[59] With the fall of the Roman Empire, the population of Rome contracted so the *Campo Marzio* became a focus in the city, with new foundations built for its services. With this contraction, monuments like the colosseum and other large complexes in the east of the city were abandoned as the city began to be concentrated in the west. What was left were a series of monuments liberated from the urban fabric as depicted in the plan by Buffolini. In Piranesi's project, the services around the western part of the city are traced to define the substructure and layout of his proposal. The proposal itself is constituted by those monuments that were liberated from the urban fabric in the east. Piranesi composes them along the lines of the Roman services and within the limit of the 400 AD *Campo Marzio*. What appears as a chaotic assemblage is a carefully planned and rational alternative to the plan for Rome that Nolli draws.[60] While Nolli represents the white space of city circulation, delineating the flows of people, products and capital, Piranesi represents the architectonic form of the city, as an analogical Rome.

Turning now to Étienne-Louis Boullée, a contemporary of Laugier and Piranesi, Boullée wrote his *Architectur, essai sur l'art*, the *Essay on the Art of Architecture* between 1778 and 1788 which remained unpublished during his lifetime. Boullée built only a few houses, so let us concentrate on some of his drawings, which Kaufmann has observed, represent a critical point in the history of architecture when, "new formal aims were consciously and lucidly striven for."[61] In his analysis of Boullée, Kaufmann noted such characteristics as the juxtaposition of either equivalent or oppositional elements emphasis on the isolation of parts, and their eventual correlation. For Kaufmann, "Boullée never designed log cabins, thatched huts, artificial ruins and the like, nor did functionalism play any role in his works. He was an artist throughout, always conscious that form must be the architects goal."[62]

Elementary forms such as the sphere were preferred by Boullée. In his project for the Newton Memorial (1784), the sphere is embedded within a cylindrical mass. The inside of which was completely empty, the curvature alone left to dominate, with openings in the form of constellations. In the Metropolitan Church (1781), we can again see the isolation of volumes, the cube and the cylinder, at the same time antithetical in form and constituting a whole, embedded within a cruciform plan. The reading room for the National Library (1781), likewise, holds a number of opposing elements in a tension. The project combines the classical element of the column but repeated to such an extent that it reads as a wall. An amphitheatre of books is held between the vast reading room floor and the vaulted roof. For Aureli, Boullée seems to appropriate the urban characteristics of Paris into a singular monument. The repetition of columns represent the uniformity of the boulevard, and the narrow wings of the U-plan *hôtel* courtyard, Boullée adapts as the enclosing walls of the reading room.[63] We will discuss Boullée further in the next chapter, so for now, Boullée leads us to Jean-Nicolas-Louis Durand.

Fig. 5.34.

Fig. 5.35.

51. See Karl Marx, *Capital: Critique of Political Economy Volume 1*, trans. by Ben Fowkes (London: Penguin, 1976). For accessible literature on Cerdà, see the following: Bernard Miller, 'Ildefonso Cerdà: An Introduction', *Architectural Association Quarterly*, 9 (1977), 12–22; Arturo Soria y Puig, 'Ildefonso Cerdà's General Theory of "Urbanización"', *Town Planning Review*, 66 (1995), 15–39; and Chapter 1 in Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge, Mass.: MIT Press, 2011).

52. See Hobsbawm, *The Age of Capital, 1848-1875*, p. 212.

53. See Anthony Vidler, 'The Third Typology', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984* (New York: Princeton Architectural Press, 1998), pp. 13–17. First published as the Editorial in *Oppositions* 7, 1976.

54. Marc-Antoine Laugier, *An Essay on Architecture*, trans. by Wolfgang Herrmann and Anni Herrmann (Los Angeles: Hennessey & Ingalls, 1977), p. 12. First published in France in 1753.

55. John Summerson, *The Classical Language of Architecture* (London: Thames and Hudson, 1988), p. 107. First published in 1963.

56. Quotation from Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development*, trans. by Barbara Luigia La Penta (Cambridge, Mass.: MIT Press, 1976), p. 4. First published in Italy under the title *Progetto e Utopia*, in 1973.

57. Emil Kaufmann, *Architecture in the Age of Reason: Baroque and Post-Baroque in England, Italy, and France* (Hamden, Connecticut: Archon, 1966), p. 134. First published in 1955.

58. Tafuri, *Architecture and Utopia*, p. 15. Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge, Mass.: MIT Press, 2011), pp. 137-140.

59. See the analysis by Joseph Connors, *Piranesi and the Campus Martius: The Missing Corso. Topography and Archaeology in Eighteenth-Century Rome* (Milan: Jaca Book, 2011), pp. 31-46.

60. See Aureli's extensive discussion in Aureli, *The Possibility of an Absolute Architecture*, pp. 85-140. Also see Pier Vittorio Aureli and Martino Tattara, 'A Field of Walls' (2012), in *Dogma: 11 Projects* (London: Architectural Association Publications, 2013), pp. 32–41.

61. Emil Kaufmann, 'Étienne-Louis Boullée', *The Art Bulletin*, 21 (1939), 212–227 (p. 219).

62. Kaufmann, *Architecture in the Age of Reason*, p. 162.

63. Aureli, *The Possibility of an Absolute Architecture*, pp. 168-170.

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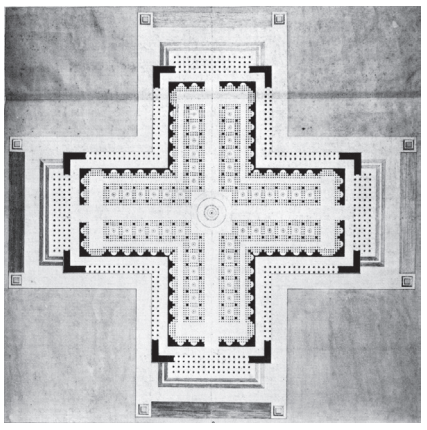

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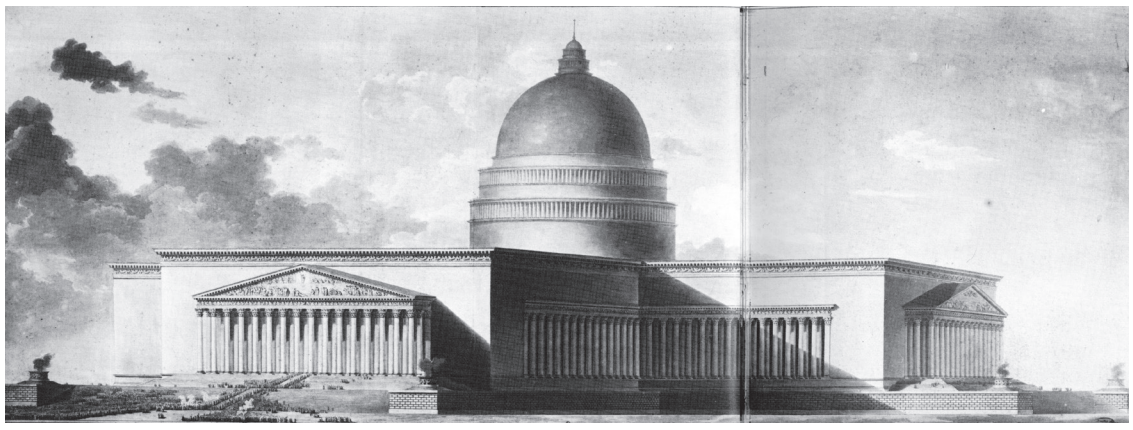

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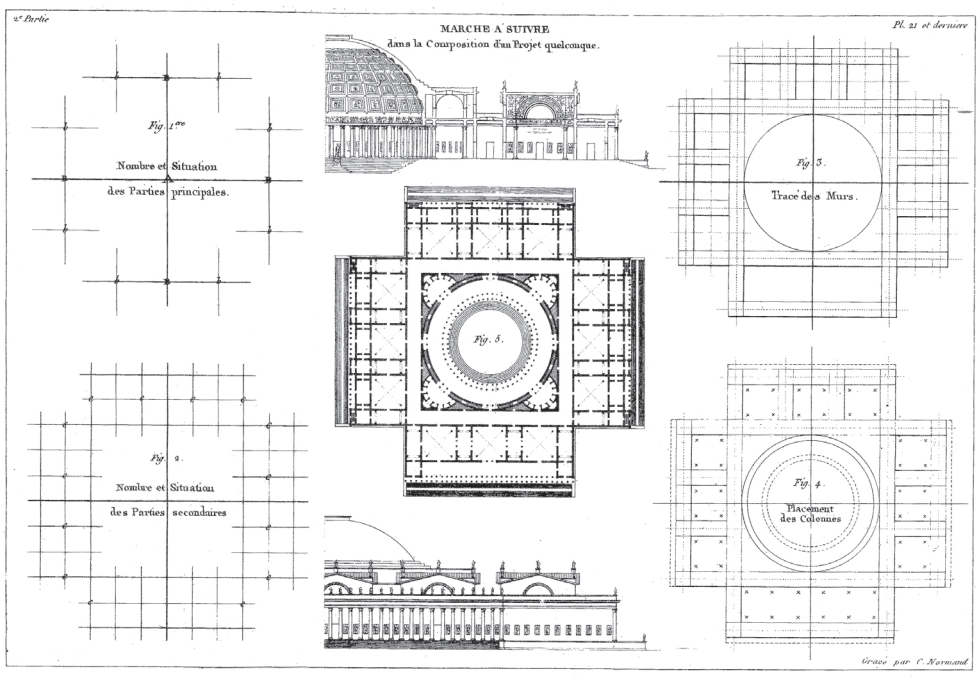

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5.32. Giovanni Battista Piranesi, Carceri, Plate VII, 1750. Drawbridges from the prison series.
5.33. Piranesi, Ichnographia, from Campus Martius Antiquae Urbis, Rome, 1762. A few specific monuments remain fixed such as the Pantheon, the elongated Piazza Navona, as well as the mausoleum's of Hadrian and Augustus on the bends of the Tiber, but housing is removed and in its place tombs and temples are densely assembled.
5.34-5.35. Étienne-Louis Boullée, Metropole, c1780. A cross plan extruded into blank walls or walls of columns, and topped with a monumental dome.
5.36. Jean-Nicolas-Louis Durand, Compositional Method, Précis, 1802-05. Four operations of the design process: 1. Basic grid axis, 2. Grid layout, 3. Distribution of rooms and tracing of walls, 4. Placement of columns. Durand rejected the theories of type by imitation from Laugier (nature) and Vitruvius (body), and put forward a procedural idea of type.

A student of Boullée, Joseph Rykwert has called Durand the only "true revolutionary architect" and in Kaufmann's words, the voice of the nineteenth century.[64] Although Durand built several domestic buildings, he is primarily known for the two publications, the *Recueil et parallèle des édifices de tout genre anciens et modernes* ("*Anthology and Comparison of all Building Genre's, Ancient and Modern*") of 1800, and the *Précis des leçons d'architecture donnés a l'Ecole Polytechnique* ("*Summary of Lectures on Architecture Delivered at the Ecole Polytechnique*") of 1802-1805. The former is a portfolio of drawings which catalogue existing works of architecture from all cultures and historic periods at the same scale using the same graphical technique. The latter is a drawn summary of the lectures that Durand undertook at the Paris *l'Ecole Polytechnique* where he was a professor, and in which Durand codifies the design procedure. We should note here the difference between the drawing techniques of Durand and Boullée. While the latter emphasised shadow to indicate volume and depth, Durand uses descriptive representation rather than the expressive. Unlike Boullée, Durand's drawings were almost always orthographic plan, section, and elevation projections, while Boullée's were frequently perspective drawings.

Durand's *Précis* was divided into three parts, each further subdivided with three sections. Part One, on architectural elements, is divided into the following: material; construction; and, form and proportion. Part Two, on composition, is divided into the following: combining elements in buildings; forming parts of buildings; and, ensembles of buildings. Part Three, on analysis of genres, is divided into the following: principle parts of the city (such as streets, bridges, public squares); public buildings (such as temples, museums, markets, hospitals); and, particular buildings (such as apartments, rural and urban houses). Within this framework, Durand codified the elements of architecture, with a view to combining those elements into larger wholes. He puts it thus:

> To combine different elements among themselves, and to pass from there to different parts of the building, and from these parts to the whole - this is the path that one must follow if he desires to learn how to compose; when one composes, on the contrary, he must begin from the whole, continue with the parts, and finish with the details.[65]

For instance, walls, columns, architraves, arcades, vaults and attics could be assembled into larger parts, such as, porticoes, atria, vestibules, internal stairs, external steps, rooms, courts and fountains. In order to proceed from part to whole, Durand's compositional principle was regulated by the grid and a hierarchy of axes. So columns were placed on the intersection of the grid, walls along the gridlines, and openings positioned within the sub-axis, between columns. This led to strict geometrical compositions based on the grid as a compositional apparatus. We can see this process demonstrated in one of Durand's plates. A procedure to be applicable to any and all buildings, as the title suggests: "On the Composition of any Project." First, the overall composition is decided. The two principle axes are drawn with a number of cross-axes (top left). Then, a number of sub-axes are drawn, depending on the programmatic requirements, which results in a grid (lower left). The walls are traced in (top right), and finally the columns are inserted (lower right).

Fig. 5.36.

Another interesting plate from the *Précis* is Durand's critique of the Panthéon in Paris.[66] He criticises the cost and its size: "Had it been a circular building," Durand writes in the caption, "it would only have cost half the money, and been vast and magnificent."[67] Durand puts forward a circular plan building with an external colonnade and hemispherical dome, as an alternative to the cruciform plan of Soufflot.

Fig. 5.37.

In parallel to Durand's thinking on design processes in the *Précis*, the pages of the *Recueil* indicate precepts for working typologically such as precedent, classification and taxonomy.[68] Durand draws forums, markets, basilica's, libraries, bridges, viaducts, prisons, hospitals, baths, theatres, villas, columns, capitals, and decorative surfaces, amongst others. There are smaller visual excurses on specific architects, such as Piranesi (Plate 16), Palladio (Plates 49-51), Scamozzi (Plate 52), and others. We see unexpected juxtapositions, such as a plate that mixes Mosques and Pagoda's (Plate 7), a Pagoda adjacent to the tower at Pisa (Plate 25), or plans and façades enclosed within the Louvre courtyard (Plate 62).[69] As in the *Précis* Durand uses descriptive representation in plans, sections, and elevations. What we see is the history of architecture drawn as singular typological examples within Durand's own analogical city.

Durand rejected both the "sentimental" rationalism of Laugier, as Kaufmann put it, and any notion of the "ideal" that would follow Vitruvius.[70] As we can view in Durand's drawings, the column orders have been purged of representational ornament. Instead, Durand puts forward the utilitarian ideas of material economy, efficient production, and according to the apparatus of the grid. In this respect, and by looking at Durand's formal representation, he seems to point the way toward ideas made explicit during the period of the Modern Movement.

Fig. 5.38.

The Tower and the Block in Modern Urban Critique

While the "long nineteenth century," as Hobsbawm termed it, was a period of "material, intellectual and *moral progress*," by contrast the decades between the outbreak of World War I in 1914 and the aftermath of World War II, were characterised by further revolution and economic crises.[71] The Bolshevik Revolution in 1917 created the Soviet Union by overthrowing the Tsarist regime and claiming a Soviet communism as an alternative to capitalism. In 1929 the New York Stock Exchange crashed. Between these events, in 1923, Le Corbusier concluded *Vers une architecture* with the words:

> There reigns a great disagreement between the modern state of mind, which is an admonition to us, and the stifling accumulation of age-long detritus.
>
> The problem is one of adaptation, in which the realities of our life are in question.
>
> Society is filled with a violent desire for something which it may obtain or may not. Everything lies in that: everything depends on the effort made and the attention paid to these alarming symptoms.
>
> Architecture or Revolution.
>
> Revolution can be avoided.[72]

The Modern Movement proposed that the new Fordist production techniques of functionality, efficiency, regularity and mass-production, should be assimilated with the production of architecture. Albert Kahn, architect for Henry Ford, designed his first factory in a reinforced concrete post and beam structure in 1905.[73] In 1910 he designed the Ford Motor Company's Highland Park factory, which became a typological paradigm for factories and production plants thereafter. Kahn applied the principles of economics and new technology to factory design, and designed the first large scale assembly line. The new factory could now mass produce cars and other heavy machinery on a scale up to that point unmatched. Fordist assembly line production coincided with the First World War, which saw the mass production of tanks and other armour for the purpose of the mass consumption of life. To depict the character of industrial production and the shock of the modern metropolis, artists like Raoul Hausmann, John Heartfield, and George Grosz invented photomontage. The photomontage artists used the preformed material of newspaper articles, postcards, and propaganda photographs as the instrument for a new kind of non-verbal visual communication.

Fig. 5.39.

Le Corbusier, who opened *Vers une architecture* with a series of photographs of factories and other industrial buildings, wrote that "the application of the spirit of mass-production and industrial organisation, the grandeur of the idea, the serenity of the whole effect, shall ravish the spirit, and bring with them the charm that a happy conception can give."[74] Rather than following the Enlightenment idea of type as imitating nature, the Modern Movement turned to industrial processes and imitated the machine. As Vidler has said:

> The remarkable new machines subject to the laws of functional precision were thus paradigms of efficiency as they worked in the raw materials of production; architecture, once subjected to similar laws, might well work

64. See Joseph Rykwert, 'In the Nature of Materials: A Rational Theory of Architecture', in *Solitary Travelers* (New York: Cooper Union, 1979), pp. 97–116.

65. The words are Durand's quoted in Sergio Villari, *J.N.L. Durand (1760-1834): Art and Science of Architecture*, trans. by Eli Gottlieb (New York: Rizzoli, 1990), p. 64.

66. See Plate 1 in Jean-Nicolas-Louis Durand, *Précis Des Leçons D'architecture Données à l'Ecole Royale Polytechnique* (Paris, 1802).

67. See Durand, *Précis Des Leçons D'architecture Données à l'Ecole Royale Polytechnique* (Paris, 1802). Also refer Jean-Nicolas-Louis Durand, *Précis of the Lectures on Architecture: With Graphic Portions of the Lectures on Architecture*, trans. by David Britt (Los Angeles, CA: Getty Research Institute, 2000). See figure for title.

68. See Jean-Nicolas-Louis Durand, *Recueil et parallèle des édifices anciens et moderne de tout genre* (Paris, 1800). Some plates are illustrated in *Solitary Travelers* (New York: Cooper Union, 1979), Volume 2, pp. 29-37.

69. The preceding plate numbers refer to those in Durand, *Recueil et parallèle des édifices anciens et moderne de tout genre* (Paris, 1800).

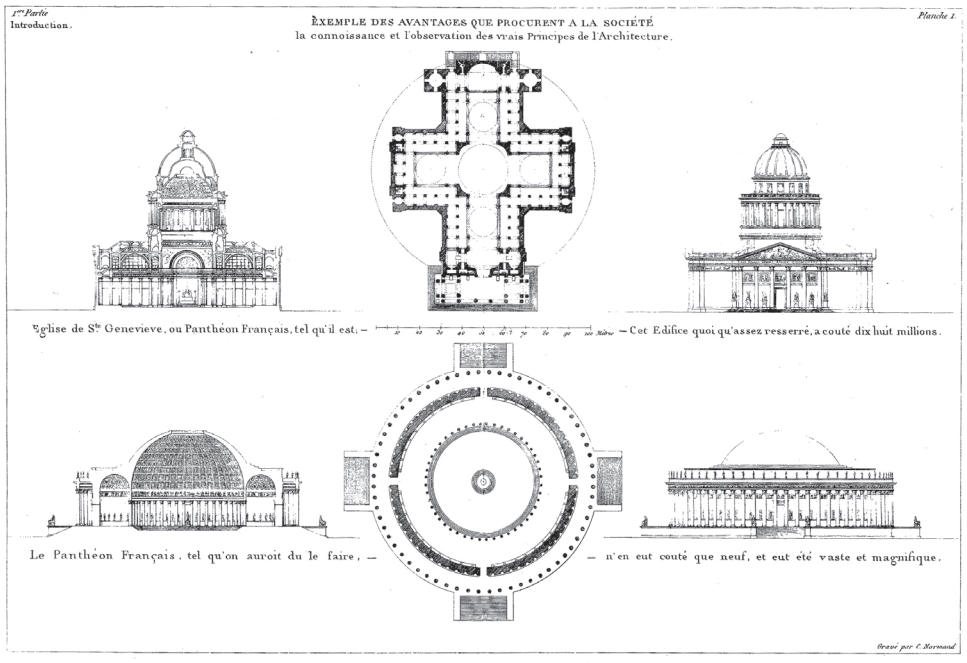
70. Kaufmann, *Architecture in the Age of Reason*, p. 210.

71. Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century, 1914-1991* (London: Abacus, 1995), p. 13. Italics in original. First published in 1994.

72. Le Corbusier, *Towards a New Architecture* (New York: Dover Publications, 1986), p. 288-289. Originally published in France under the title *Vers une architecture*, 1923. For an updated translation see also Le Corbusier, *Toward an Architecture*, trans. by Jean-Louis Cohen (London: Frances Lincoln, 2008).

73. Pevsner, *A History of Building Types*, pp. 287-288.

74. Le Corbusier, *Towards a New Architecture*, p. 40.



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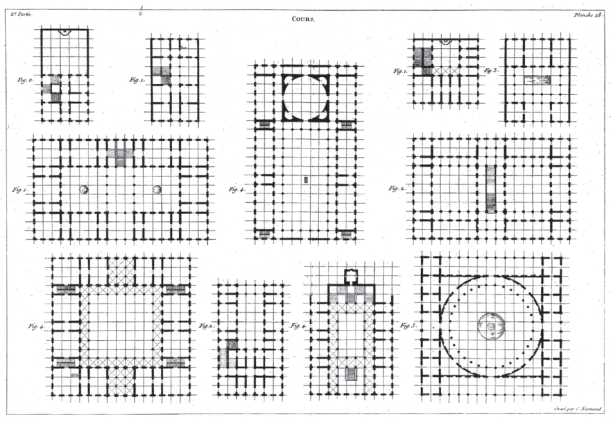

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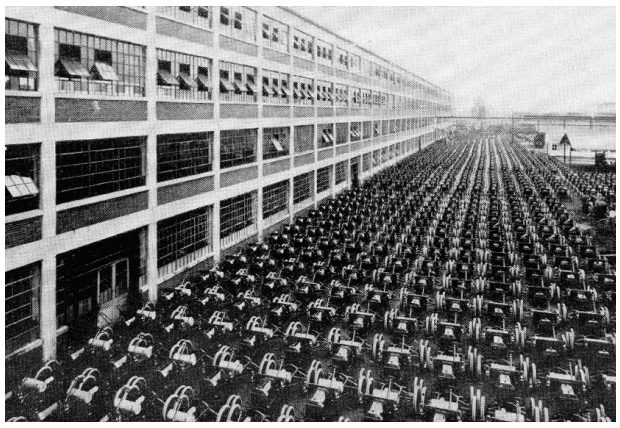

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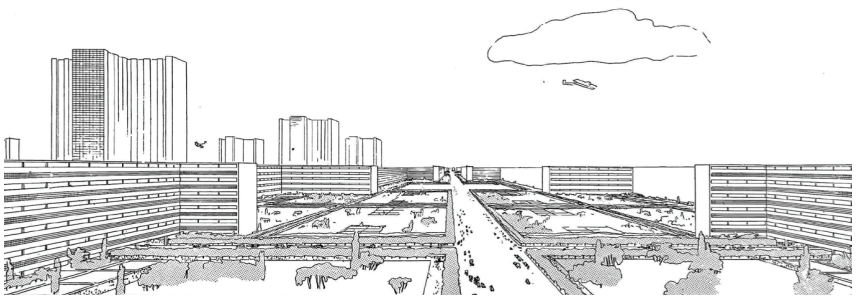

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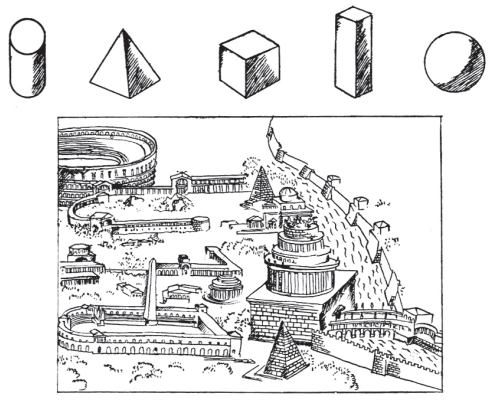

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5.43.

5.37. Durand, Alternative to the Paris Pantheon, Précis, 1802-05. Durand proposes a circular plan to cross-plan by Soufflot.
5.38. Durand, Lessons on the grid, 1802-05. Columns placed at the intersection of the primary grid, walls along the line of the grid, and openings placed inter-axially.
5.39. Fordist production, c1913. Model T chassis at the Highland Park factory designed by Albert Kahn. Photographs of which were included as illustrations in Le Corbusier's Vers une Architecture.
5.40. Le Corbusier, Ville Contemporaine (Contemporary City) for 3 million people, 1923.
5.41. Ludwig Hilberseimer, Hochhausstadt (High-rise City), 1924. A montage of tower-slab and block types.
5.42. Le Corbusier, Studies after Pirro Ligorio's Rome Imago with Piazza Navona, Pyramid of Cestius, and Castel Sant'Angelo in the foreground drawn as isolated monuments.
5.43. Le Corbusier, Studies for Plan Voisin transformation of Paris, 1925. Singular monuments from which to build the city.

with similar effectiveness on its unruly contents - the users.[75]

In 1914 Le Corbusier proposed the Maison Dom-Ino, a typological diagram for the construction and standardisation of the house. The Maison Dom-Ino was further developed in the Maison Citrohan and then as a unit in the project *Ville Contemporaine pour 3 millions d'habitants* ("*Contemporary City for three million people*"). The former a flat-roofed and open plan house for suburban development presented in *Vers une architecture*, and the latter a city for three million people presented in *Urbanisme* and known as *Ville Contemporaine*, the basic principle of which was to ease pressure on the city centre by increasing transport lines and green space. The *Ville Contemporaine* consisted of twenty-four sixty-storey office towers at the centre, cruciform in plan, along with a railway and airport interchange. These were surrounded by cultural buildings, then residential buildings of two types: set-backs, in between which were areas of recreation like tennis courts, swimming pools and football fields; and the block. Towards the city edge were industrial buildings. Beyond this were "garden cities" that could be reached by highways. Thus, Le Corbusier zones the city: an urban core, the residential part, industrial edge, and suburban periphery. The idea of type is manifest through zoning and as a principle of cause and effect between the function and form of different buildings.

Fig. 5.40.

"Unity of operation," Le Corbusier writes in the chapter of *Vers une architecture* titled "The Lesson of Rome," "a clear aim in view, classification of the various parts. Immense cupolas, with their supporting drums, imposing vaulting, all held together with Roman cement; these still remain an object of admiration."[76] Radically avant-garde yet historically aware, Le Corbusier discusses classification, and the idea of type. But Le Corbusier's idea of type is one of singular examples: "The Pantheon, the Colosseum, the Aqueducts, the Pyramid of Cestius, the Triumphal Arches, the Basilica of Constantine, the Baths of Caracalla."[77] All internalised as "pure forms," ready-made solutions that mix history and industry, toward a language of the city. Gabriele Mastrigli has put forward a comparison between the "analytical gaze" with which Le Corbusier viewed Paris, to that of Piranesi in Rome.[78] For Mastrigli, the drawing that Le Corbusier made in preparation for his Plan Voisin project *Plan Voisin with Paris Monuments* represents the "spirit" of Paris, and at the same time, Le Corbusier's evaluation of the most significant urban forms and spaces of the city as specific starting points for a new city. Le Corbusier proposes another city, one analogous to the current city, and one that selects a few key buildings as its point of departure. Mastrigli quotes Le Corbusier: "We have a legacy of objects we admire, whose dimensions and presence are an unfailing source of joy: Place Vendôme, the courtyard of the Louvre, Place de la Concorde."[79] In the language of Rossi, the buildings that Le Corbusier cites are the "primary elements" of the city. Monuments that contain the collective memory of Paris, yet become Le Corbusier's own analogical Paris.

Fig. 5.42.

Fig. 5.43.

While in Le Corbusier's hierarchically organised *Ville Contemporaine*, programmatic diversity is reflected through formal difference, in Ludwig Hilberseimer's *Hochhausstadt* project, the so called High-rise City, a hybrid slab/block is the singular type. Hilberseimer's High-rise City was a theoretical project that polemically opposed Le Corbusier's *Ville Contemporaine* and is presented as an alternative in his *Groszstadt Architektur* of 1925. Hilberseimer argued that despite the apparent concentration of vertical high-rises at the centre of Le Corbusier's *Ville Contemporaine*, it is essentially horizontal because it concentrates business at the centre and leaves the periphery to expand with housing. In the High-rise City, Hilberseimer stacks functions, and cites the Medieval city in which the individual lived above their workplace as precedent for his concept of the slab/block type. Industry is placed throughout the five lower storeys of the block, and the residential within the fifteen storey slab above. Commercial facilities are located where the slab and block meet at mid level. Public transport is below ground, private vehicle traffic is at ground level, and pedestrian circulation is at the mid level. We can see this in the perspective drawings in which the residential slab is set back from the block, which becomes a plinth element. This is the entrance for the residential slabs and as Hilberseimer writes, where shops, smaller stores, and restaurants are proposed.

Fig. 5.41.

75. Anthony Vidler, 'The Third Typology', in *Architecture Theory Since 1968* (Cambridge, Mass.: MIT Press, 1998), 288–294 (p. 290). This is an expanded version of Vidler's Editorial for *Oppositions*. Subsequent references will be to this version.

76. Le Corbusier, *Towards a New Architecture*, p. 158.

77. Ibid., p. 158.

78. See Gabriele Mastrigli, 'Manipulations, or, Rethinking Tabula Rasa', *Log*, ed. by Cynthia Davidson, 10 (2007), 71–79. Also refer Gabriele Mastrigli, 'In Praise of Discontinuity', in *Visionary Power: Producing the Contemporary City*, ed. by Christine de Baan, Joachim Declerck, and Véronique Patteeuw (Rotterdam: NAi Publishers, 2007), pp. 112–124.

79. The words are Le Corbusier's quoted by Mastrigli in 'Manipulations, or, Rethinking Tabula Rasa', *Log*, p. 73.

When we analyse Hilberseimer's *Groszstadt Architektur* we can see his commitment to the city as a prerequisite for architecture.[80] Organised into ten chapters, the first two, "The Metropolis," and "Urban Planning," and the final "Metropolisarchitecture," describe the general urban condition and propose a response. The chapters in between address the programmatic types of the city, as the chapter headings read: "Residential Buildings," "Commercial Buildings," "High-rises," "Halls and Theatres," "Transportation Buildings," "Industrial Buildings," "Building Trades and the Building Industry." Here we can see the relationship of the city made up of types, either formal or programmatic. Contrary to the Renaissance notion of harmonious unity between human, building and city, or Enlightenment ideas of the "natural city," Hilberseimer puts forward a sombre industrial reality. One based on the relationship between the individual cell, and the urban whole. Hilberseimer writes the following:

> Metropolisarchitecture is considerably dependent on solving two factors: the individual cell of the room and the collective urban organism. The solution will be determined in the manner by which the room is manifested as an element of buildings linked together in one street block, thus becoming a determining factor of the city structure, which is the actual objective of architecture. Inversely, the constructive design of the urban plan will gain considerable influence on the formation of the room and the building as such.[81]

In Tafuri's analysis, Hilberseimer's cell becomes the main element in the "production line that concludes with the city."[82] The single building becomes a rational assemblage of cells with the potential for endless reproduction. While Hilberseimer did not conceive his work using the idea of type, his theoretical writing and projects are developed by an analysis of the city through which clearly defined typological form is articulated.

The idea of type re-emerged in the 1950s through Argan, whom we have already discussed in relation to Quatremère and the work of Rossi. Following Argan, Ernesto Rogers proposed that architectural knowledge was based on the immediate acceptance of type. For Rogers, it was through the selection of a type that the architect establishes a link with society making a connection between a way of life, architectural form, and continuous comment on the past. We have already mentioned that this "historical consciousness" was described by Rogers as *continuità*, for continuity. Giorgio Grassi, a collaborator with Rossi, put forward the following in the essay "Avant-Garde and Continuity:"

> Now the world of possible forms, the domain of the work of architecture, reveals its innumerable ties to the past through images constructed over time; it is able to explain itself only through the confrontation with this past; and it becomes reality only by means of a concrete, positive *imitation*.[83]

The italics are Grassi's and what he means by positive imitation is not a sentimental re-evocation of forms or styles, but the inclusion, unification, surpassing and continuation of architectural form. Reading beyond the words of Grassi, we can interpret them in relation to the idea of type. It is the capacity of type to produce transformation, which is a necessary and continuing dialectic with the history of architecture as architecture confronts the cultural sphere.

It was through the idea of type that a critique of the Modern Movement was developed. While the Modern Movement looked to understanding the city as a product of machine production, architects and theorists like Argan, Rogers, Rossi, and Grassi looked to understanding the city by way of the Enlightenment idea of type. For these architects, the production of form became identified with the city itself: "The city," Vidler writes, "provides the material for classification, and the forms of its artefacts over time provide the basis for recomposition."[84] The clarity of the eighteenth-century city, its public spaces and institutional forms, the coherence of streets, avenues, blocks, arcades, squares became material for architectural production. But these forms do not come neutral. They retain a history accrued by human experience, and formal transformation. They acquire a history that reflects the ethos of the city.

One of the architects who followed this line of thinking was Oswald Mathias Ungers, who participated in the CIAM (Congrès Internationaux d'Architecture Moderne) conference in Aix-en-Provence, France in 1954. At

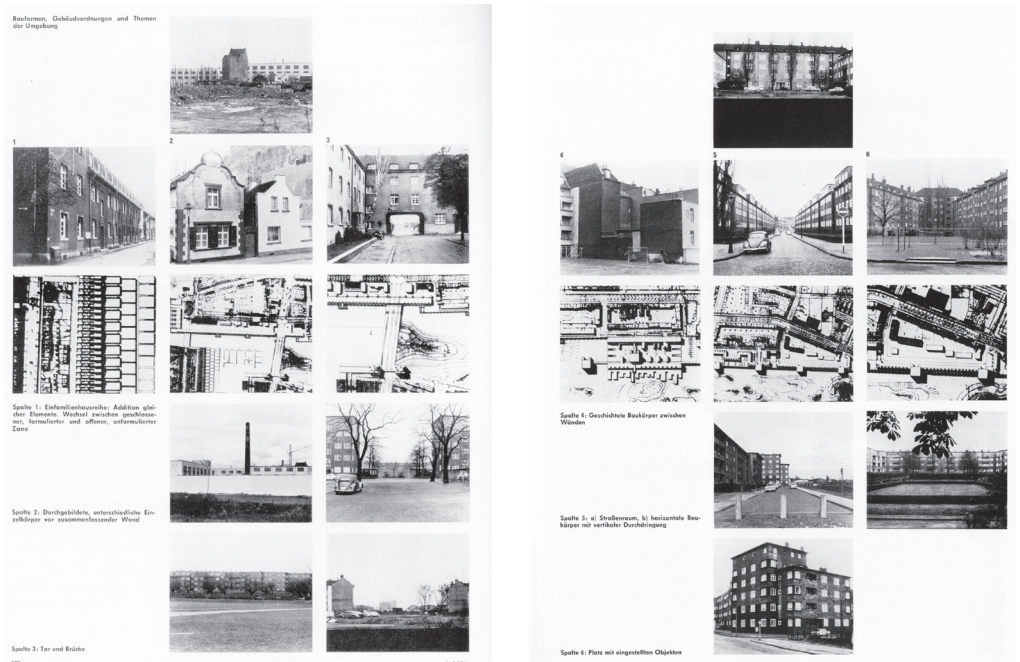
80. See Ludwig Hilberseimer, *Metropolisarchitecture and Selected Essays*, ed. by Richard Anderson, trans. by Julie Dawson and Richard Anderson (New York: GSAPP, 2012). First published in Germany as *Groszstadt Architektur*, in 1927.

81. Hilberseimer, *Metropolisarchitecture*, p. 271.

82. Tafuri, *Architecture and Utopia*, p. 105.

83. Giorgio Grassi, 'Avant-Garde and Continuity', in *Oppositions Reader: Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984* (New York: Princeton Architectural Press, 1998), 390–399 (p. 397.). First published in Oppositions 21, in 1980.

84. Vidler, 'The Third Typology', p. 288.



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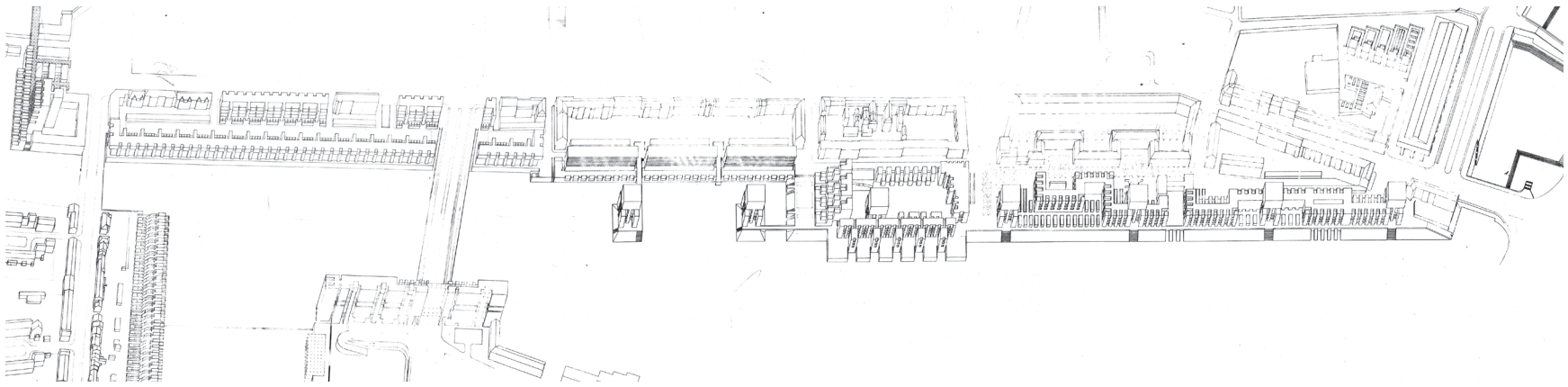

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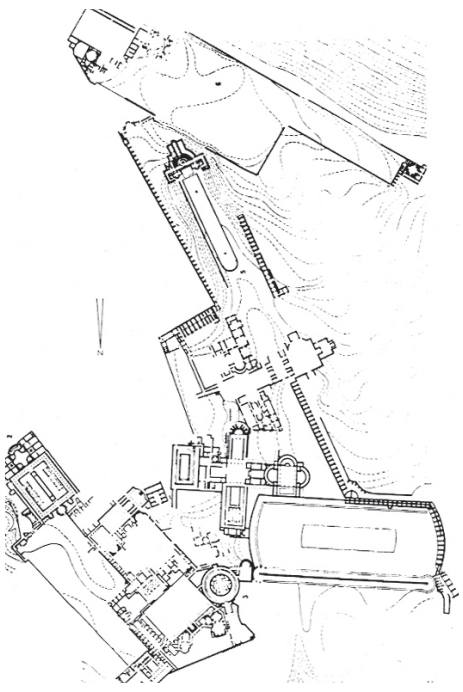

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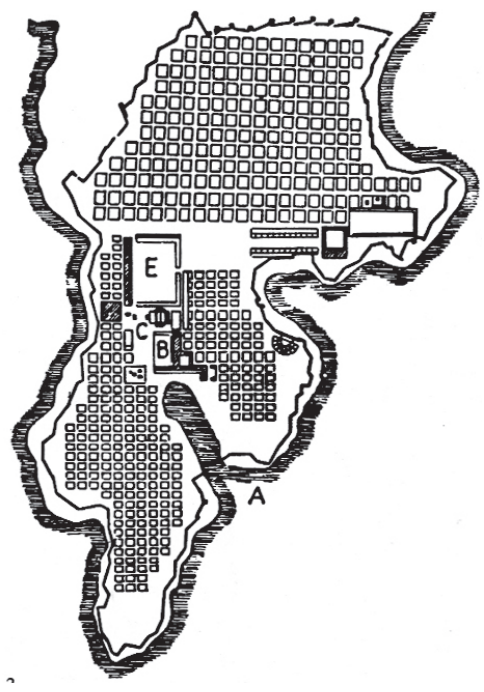

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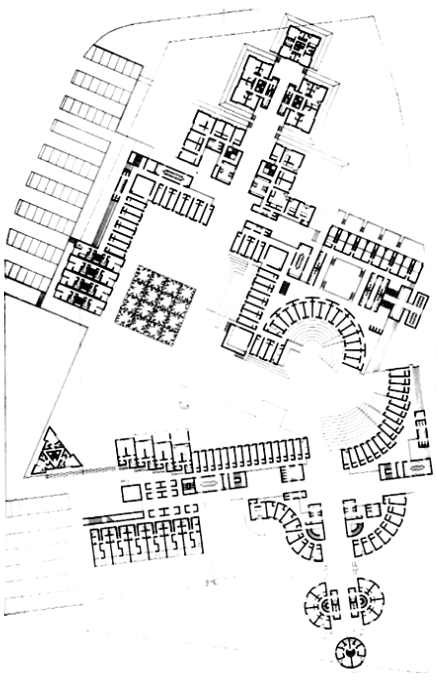


5.48.

5.44-5.45. Oswald Mathias Ungers, Competition Entry for the Grünzug Süd, Cologne, 1962. Ungers' project evolves a dialectic between the extension of self-same formal elements from an analogical understanding of the typical themes of the city district. Sections of his proposal run through the centre of the image panel, with photographs of the site "as found" running above and below. These images are the material for Ungers' design, the axonometric drawing of which is figure 5.45.

5.46. Hadrians Villa, c2AD.

5.47. Ancient Miletus, regular blocks vary in scale with contrasting open and closed forms indicating its social and political centre.

5.48. Ungers, Competition Entry for Student Residences, Twente, Enschede, Netherlands, 1964. Site plan. Durand's geometrical types mix with the complexity of Hadrian's villa, and the regularity of block morphology.

that conference the "universal" criteria of work, living, traffic and recreation put forward by Le Corbusier and the older generation of Modern Movement architects was debated in relation to the consideration of new criteria such as local conditions, the so called *genius loci*. Ungers later participated in the final CIAM meeting of 1959 when the topic was "tradition," and Ernesto Rogers put forward the Torre Velasca building in Milan.[85] It is interesting to acknowledge this background when considering Ungers' work because it points to the relation between universality and singularity, of the historic and the modern.

Fig. 5.46.
Fig. 5.48.

In his project for student housing in Twente, the Netherlands (1964), Ungers transforms geometrical figures such as the circle, square and triangle, into singular formal types. The result is a tightly organised composition that recalls both Durand's syntactical form making, and the fluidity of Hadrian's Villa. In the essay "Architecture of the Collective Memory," Ungers puts forth:

> The project attempts to be a small replica of a larger model composed as a microcosm in which the macrocosm is reflected. One discovers all the prototypical parts and set-pieces, the basics of the larger counterpart: the individual house, the urban block, the building complex, the object in the garden, the street and the plaza, the individual environment as well as the collective one. Private and public functions complement each other in an environment composed of citations embracing a morphological continuum of housing forms and residential types.[86]

Fig. 5.44.
Fig. 5.45.

Thus Ungers' project reflects the large city, borrowing its formal language in both its parts, and as the whole. In another project for a residential district proposed at Cologne Grünzug Süd (1962), Ungers put forward a strategy based on what he has called "reality as found."[87] He takes as a starting point an area of the city and reads its "ordinary" form. The project at Grünzug Süd evolved from a study of the areas open and closed spaces, the rhythm of the street, the serial pattern of openings in the elevations, that uncover the latent formal themes of the city. Ungers presented his design with a panel of illustrations that depict this study, as he does in many of his projects. This catalogue of the "as found" situation through photographs and plans, in this case, and in different notational techniques elsewhere is an important process for Ungers. In *City Metaphors*, Ungers has written that it is important to process unrelated and diverse aspects of reality through the use of images, analogies, models, signs, symbols, and allegories.[88] As we can see in the project, the references are internalised and transformed into an austere composition, through which Ungers' reading of the latent aspects of the city can be seen in the rhythmically arranged parts of the scheme, the repetitive openings, and the overall linear composition. These typological and analogical processes are advanced in Ungers' later projects when he put forward the concept of the "dialectic city," in a book of the same name.

"The modern city is dialectical," writes Ungers, "it is both thesis and antithesis. It reflects the contradictions of society and also its technical systems."[89] There are two main aspects to Ungers' dialectic city: "places" and "layers." On one hand a city is made up of contrasting parts which form a loose urban association such as monumental blocks, solitary buildings, ribbon developments, commercial, cultural and residential areas. On the other, the city signifies a background onto which something is superimposed. This reflects the city as a basis for successive layers of planning such as political, social, as well as architectural forces, which complexify the nature of the city. In dialectical fashion, both places and layers, at the same time compliment and oppose each other. The theme of the book follows the block as a type. As Ungers writes at the beginning of the book, block structures have proved enduring, and he outlines examples from the ancient Greek city of Miletus, to nineteenth-century Manhattan. The block as a type with any number of formal variations, defined by lanes and streets, or atria and courtyards. Another characteristic of the book, as with other of Ungers projects, is the interlacing of images with text. Ungers uses historical photographs and plans, along with diagrams to describe his approach to each project. They display the method of working by analogy, from individual types, to wider morphology, to description by keywords, representation in images and a return to the singularity of form.

Fig. 5.47.

85. Oswald Mathias Ungers and Heinrich Klotz, 'Excerpts from a Dialogue Between Heinrich Klotz and O.M. Ungers (1977)', in *O.M. Ungers: Works in Progress 1976-1980*, trans. by Jane O. Newman and John H. Smith (New York: IAUS and Rizzoli, 1981), 20–23 (p. 20).

86. Oswald Mathias Ungers, 'Architecture of the Collective Memory: The Infinite Catalogue of Urban Forms', *Lotus*, 24 (1979), 4–11 (p. 7).

87. See Kenneth Frampton, 'O. M. Ungers and the Architecture of Coincidence', in *O.M. Ungers: Works in Progress 1976-1980* (New York: IAUS and Rizzoli, 1981), pp. 1–5.

88. See Oswald Mathias Ungers, *Morphologie/City Metaphors* (Köln; New York: Walther König, 2011). First published in Germany, in 1982. Ungers's short essay is pp. 7-15.

89. Oswald Mathias Ungers, *The Dialectic City*, ed. by Stefan Vieths (Skira, 1997), p. 19.

Summary

In this overview of only a few of the canonical theories about type we began by remembering that the idea of type is a category that underlines human reason as a way to divide, categorise and describe objects by a common characteristic. Then Rossi's idea of type was discussed in relation to Quatremère's concepts of "type" and "character" with emphasis on type as an historically determined generalising framework for analysis and production. We said that type spatialises the shared customs, memory, sociability, and the aesthetic inclination of any given culture. This was situated with a discussion on major figures since the Renaissance to Modernism whose work was either recognisably "typological" or whom put forward a theory of type.

During the Renaissance, type was conceived in relation to the classical Orders, which were understood as a rhetorical device. They represented social class, the power of a patron, and at the same time provided dignity for the city. The idea of type was fully theorised in the Enlightenment through Laugier and Quatremère, who each put forward type as it related to the idea of architectural origins. As the first men constructed shelter, they constructed private houses, public monuments and spaces, from which architecture and the city developed. If there is such an origin, then it is the city which is a prerequisite of architecture. We turned to Le Corbusier and Hilberseimer for how type was considered in the Modern Movement. Type was revisited by Argan and Rogers in their critique of the Modern Movement in the 1950s, which Rossi theorised in the 1960s and 1970s. We then turned to a few of the architects and thinkers around the time of Rossi, referring to Grassi and Ungers.

Thus, we have tried to describe the idea of type as it has developed in theory and in built architecture and how type relates to culture, history, means of production and representation which results in the singularity of architectural form. A view toward a problematic synthesis of city and architecture, collective and individual, at times conditioning, at times conditioned by the ethos of a people. Thus, a tension always exists between analysis and production because the type emphasises a generalising view of architecture, yet production – the actualisation of a singular typical-form – is paradoxically particular and unique, contingent on any number of factors including the will of any given authority and of the architect as author. Yet as Rossi has said, "Ultimately, we can say that type is the very idea of architecture, that which is closest to its essence. In spite of changes, it has always imposed itself on the 'feelings and reason' as the principle of architecture and of the city."[90] Now that we have analysed Rossi's idea of type and situated it in a lineage of key moments, in the following chapter, we will turn once again to Rossi, and take up his thesis on autonomy and architecture.

90. Rossi, *The Architecture of the City*, p. 41.

6.

AUTONOMY

WITHDRAWAL, CONFRONTATION, AND INTEGRATION

If on one hand language allows man to "enter into history," on the other hand it remains a "filter" that cannot let through the lived world of each human being.

Christian Marazzi, *Capital and Affects*, 1994.[1]

In the last chapter we discussed a lineage of canonical theories about type by major figures. To understand the conceptual vocabulary of type, and how the idea of type is actualised we considered the architectural treatise, as well as built and unbuilt examples. We analysed Rossi's theory of type as first, a generalising framework for understanding a typology of buildings in relation to the city and second, as a particular moment in the formal definition of a project that gives form to the ethos of culture. We discussed examples of this within the canon of architecture. Further, we said that Rossi fully theorised type after the category was revisited by Argan in "On the Typology of Architecture."[2] Rossi's theory of type, as we have discussed, developed in the writings prior to and in the publication of *The Architecture of the City*, and also in the built and unbuilt projects of Rossi. Thus, Rossi's buildings should be viewed as an extension of his research on type. While type as the idea of architecture was the main proposition articulated in *The Architecture of the City*, it was a proposition linked to a general thesis of autonomy for architecture as a discipline. With this in mind, it is worthwhile rehearsing a few statements by Rossi on the interrelated categories of architecture, city, type, and autonomy.

In the Introduction to *The Architecture of the City* Rossi wrote the following: "we can study the city from a number of points of view, but it emerges as autonomous only when we take it as a fundamental given, as a construction and as architecture."[3] We should remember here that Rossi viewed the city and architecture as one and the same because architecture came into being with the city. As Rossi says, architecture is the "final constructed result," of a complex operation involving the historically determined socio-economic, aesthetic and political relations as well as the life of the city itself. Architecture, as the city, should be understood as an autonomous and distinct category of reality, analysable through architecture's own specific values, visual conventions, conceptual and formal principles. At their most concrete those conventions are based on the problem of form. This leads to the relation between type and autonomy, because the language of form can be understood by referring to the architectural and urban types that make up the city. However, as the city and architecture are viewed reciprocally, then we need to be clear that understanding architecture as autonomous is to view architecture not only from the point of view of form. Instead, the notion of formal autonomy puts forward architecture as both conditioning and conditioned by the complex operations mentioned above, involving historically determined socio-economic, aesthetic and political relations. Put another way, Rossi did not view architecture as the absolute autonomy *from* the complex relations that give rise to the city, but rather, he proposed an autonomy *for* architecture. He said, "I have never spoken of an absolute autonomy of architecture."[4] Rossi reiterated the point that the autonomy for architecture should be viewed as a reciprocal relation between conditioning and conditioned, of architecture's interactivity and confrontation with the forces and relations that produce the city. So architecture and city are correlated in a necessary and reciprocal dialectic. In "Architecture for Museums" Rossi put it thus:

Fig. 6.1.

Fig. 6.2.

> Architecture is born out of, and is one with, the traces of a city. But by this formation, and by its continuous involvement with the urban context, even architecture elaborates certain principles, and transmits itself by certain laws, that make it autonomous.[5]

"Is architecture to be considered as a self-referential system, with its own traditions and its own system of values," Alan Colquhoun asked in the 1970s, "or is it rather a social product which only becomes an entity once it has been reconstituted by forces external to it?"[6] This statement underlines much of the discussion in this chapter, which considers autonomy as a *relational* category.

In recent years, the theme of autonomy in architecture has been discussed in texts by the following commentators: Pier Vittorio Aureli, Michael Hays, Reinhold Martin, Anthony Vidler, and Peter Eisenman, who all revisit, to a varying extent, the work of Rossi. Aureli puts forward a thesis related to autonomy and the "political form" of architecture invoking the work of Rossi on type.[7] First in relation to the *Autonomia* political movement in Italy in the 1960s and 1970s, and again through reading Rossi on the "exalted rationalism" of Boullée, via the political thinker Carl Schmitt's category of "exception."[8] Hays initially proposed a "critical architecture" which he developed most recently in a thesis that claimed architecture "desired" to be autonomous, invoking, amongst other architects, Rossi on typology.[9] Martin presents us with a critique of power, and argues that, "architecture makes power real."[10] His proposition is to view the dialectical relations of autonomy, and that architecture operates at the intersection of production and representation as a fully materialised form of immaterial production. Martin's text crosses a vast terrain and he proposes that Rossi's project for architecture's autonomy is premised on the "transhistorical" and "transcultural" persistence of architectural types. Vidler concentrates on the period between 1945 and 1975 to read the work of the four historians Emil Kaufmann, Colin Rowe, Reyner Banham, and Manfredo Tafuri, who, operating at the same time, debated the beginning of modernity and the role of history in architectural practice. Beginning with Kaufmann, Vidler debates autonomy as a way of classifying architectural form, and as a way of defining the role of the architect within the professional world. Vidler understands Rossi's autonomy thesis as relating to the "internal structure of architectural typologies and forms, as they composed part of the sedimented structure of the historical city."[11] It is interesting to note that Eisenman wrote the Foreword to Vidler's book, and said that the concept of autonomy must be "rethought" so that architecture can once more be critical of its own discipline.[12]

While most of the commentators mentioned above link Rossi's category of autonomy with an almost entirely formal condition, our purpose will be to debate the extent to which autonomy is a dynamic and multifaceted category. We will first briefly situate the idea of autonomy as a category external to architecture. We will then consider autonomy as a category internal to architecture. Therefore, we will discuss the language of autonomy. We will follow some of the recent texts that discuss Rossi and autonomy. We will refer to texts by Kaufmann and Tafuri, as well as projects by Eisenman, Tschumi, Rossi and others.

Autonomy and the Productive Power of Language

It is possible to situate autonomy in a number of ways. For instance, at the end of the eighteenth-century, in the philosophy of Immanuel Kant, who stated in *The Critique of Practical Reason* that *autonomy* was for an action determined by our own free will, in opposition to *heteronomy*, which was for the influence of some external authority, such as the social. As Kant put it,

> *Autonomy* of the will is the sole principle of all moral laws and of the duties conforming to them; any *heteronomy* of the power of choice, on the other hand, not only is no basis for any obligation at all but is, rather, opposed to the principle of obligation and to the morality of the will.[13]

1. Christian Marazzi, *Capital and Affects: The Politics of the Language Economy*, trans. by Giuseppina Mecchia (Los Angeles, CA: Semiotext(e), 2011), p. 38. First published in Italy in 1994.

2. Giulio Carlo Argan, 'On the Typology of Architecture (1962)', in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory, 1965-1995*, ed. by Kate Nesbitt, trans. by Joseph Rykwert (New York: Princeton Architectural Press, 1996), pp. 242–246. First published in Italian in 1962, and translated by Joseph Rykwert in 1963 for Architectural Design No. 33, December 1963.

3. Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), p. 22. Originally published in Italy by Marsilio under the title *L'architettura della città*, 1966.

4. Aldo Rossi, 'Introduction to the Portuguese Edition of The Architecture of the City' (1971), in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), 169–177 (p. 169). "Autonomy" as a keyword seems to leave Rossi's vocabulary by the time *A Scientific Autobiography* was published in 1981. There are only two direct references to autonomy in that book. One referring to the book *Paseos per Cordoba* which identifies the "autonomy of the researcher" as the protagonist of the book and describes the streets and urban life of Cordoba. Rossi places himself walking the streets of Europe as an autonomous researcher. The second instance describes the autonomous structure of the Duomo in Milan. See p. 19 and p. 58 respectively.

5. Aldo Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, ed. by J O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), 14–25 (p. 18).

6. Alan Colquhoun, 'Rules, Realism and History (1976)', in *Collected Essays in Architectural Criticism* (London: Black Dog Publishing, 2009), 52–57 (p. 52).

7. See Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013) and Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge, Mass.: MIT Press, 2011).

8. Aureli, *The Possibility of an Absolute Architecture*, pp. 175-176. See Carl Schmitt, *Political Theology: Four Chapters on the Concept of Sovereignty*, trans. by George Schwab (Chicago: University of Chicago Press, 2005).

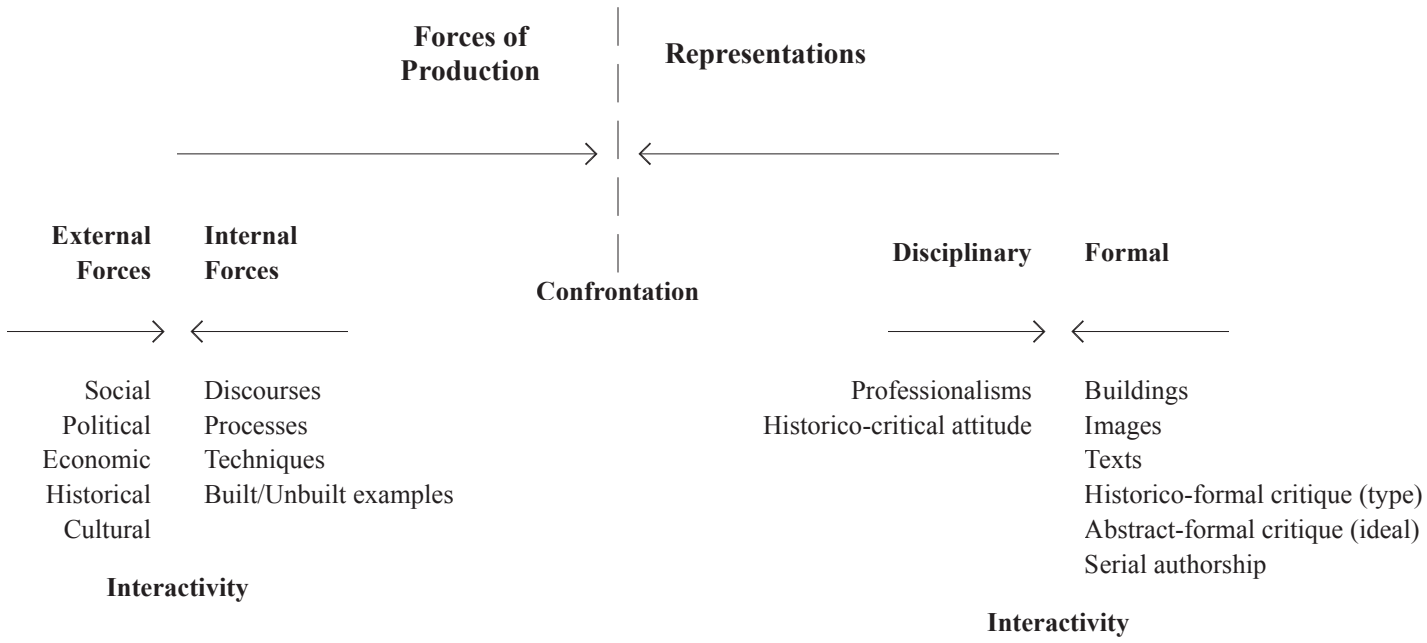
9. See K. Michael Hays, 'Critical Architecture: Between Culture and Form', *Perspecta*, 21 (1984), 14–29; and K. Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010).

10. Reinhold Martin, *Utopia's Ghost: Architecture and Postmodernism, Again* (Minneapolis: University of Minnesota Press, 2010), pp. xiii-xiv.

11. Anthony Vidler, *Histories of the Immediate Present: Inventing Architectural Modernism* (Cambridge, Mass.: MIT Press, 2008), p. 55.

12. Peter Eisenman, 'Foreword: [Bracket]ing History', in *Histories of the Immediate Present: Inventing Architectural Modernism* (Cambridge, Mass.: MIT Press, 2008), vii–xii (p. xi).

13. Immanuel Kant, *Critique of Practical Reason*, trans. by Werner S. Pluhar (Indianapolis, IN:



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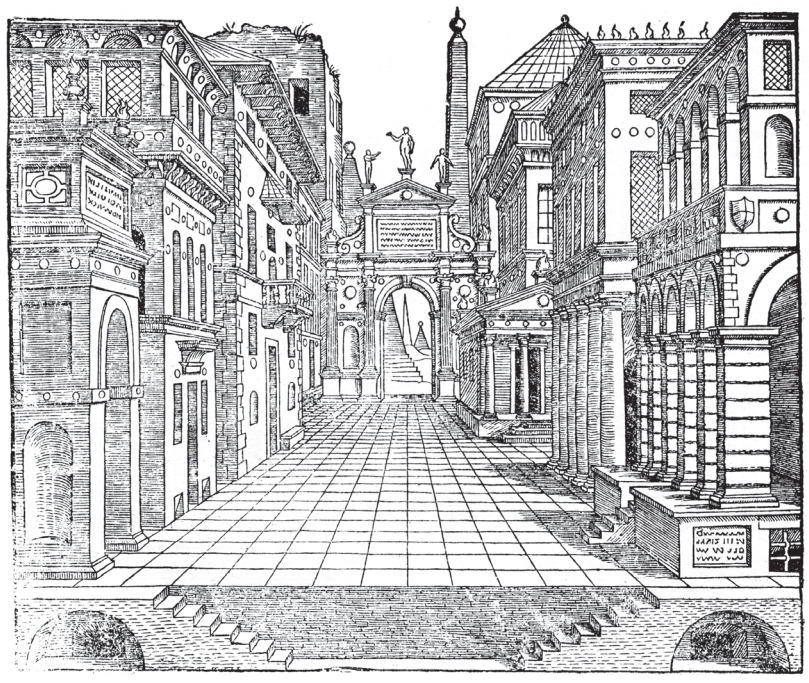

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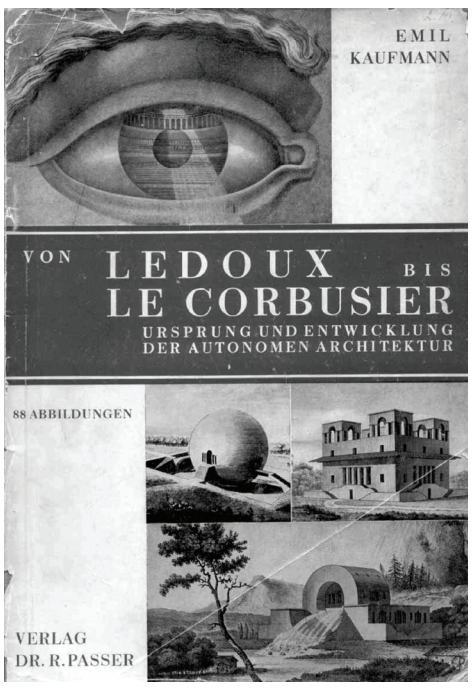


6.3.

6.1. Preliminary conceptual framework to understand the confrontation and interactivity of architecture with sociality. On the left, forces of production. On the right, architecture as an autonomous discipline. However, architecture embodies forces of production and becomes their formal representation. The confrontation between the two conditions the other.

6.2. Sebastiano Serlio, Tragic Scene, 1537. Although an heterogeneous agglomeration of palazzo's, the "tragic" street is delineated with columns, pediments, and statues suited to princes and kings. It depicts a will to classical order, the representation of power, which architecture is the final constructed result.

6.3. Emil Kaufmann, Front cover of From Ledoux to Le Corbusier, 1933. The title and subtitle, "on the origin and development of autonomous architecture," put forward Kaufmann's thesis.

Here, autonomy is a moral principle, which is not necessarily guided by prior experience. While these were Kant's words on ethics, he elaborated this discussion on aesthetics in *The Critique of Judgement* written two years later. There are sights and objects, that Kant says, so strongly engage the imagination because of their magnitude and power, that they become separate, free and autonomous from the everyday. This implies the reorientation of the arts towards a social "purposelessness," described by Kant as "purposiveness without purpose."[14] In this work, Kant put forward aesthetics as the philosophy of the arts, and in doing so provided the arts with the means of explaining their purpose within an eighteenth-century society in which the artist was free of religious and aristocratic patronage.

In "Modernist Painting" the art critic Clement Greenberg identified in Kant, a "self-critical tendency," because Kant, "used logic to establish the limits of logic."[15] Thus Kant put forward the principle of the autonomy of human thought as human thought that need not and cannot answer to any authority outside itself. Guided by this, Greenberg viewed autonomy as the procedure of "bracketing" the discipline of art in order to be critical of its specifics, for instance the techniques and painterly processes from the history of painting. He wrote that the essence of Modernism was, "in the use of characteristic methods of a discipline to criticize the discipline itself, not in order to subvert it but in order to entrench it more firmly in its area of competence."[16] This was a development of Greenberg's thesis of formal autonomy, raised in his essay "Avant-garde and Kitsch," published in 1939.[17] He wrote, "Content is to be dissolved so completely into form that the work of art or literature cannot be reduced in whole or in part to anything not itself."[18] Greenberg proposed that autonomy in art was an historical critique based on formal autonomy, "a superior consciousness of history," that was at the same time a "criticism of society" in order to resist mass-culture.[19]

Fig. 6.4.

Greenberg conceptualised autonomy as a self-critical category for the development of art. By contrast, Theodor Adorno viewed autonomy as a dialectical category between formal autonomy and social function. In Adorno's "negative dialectics," each side of the opposition is also present in the other by its exclusion. In *Aesthetic Theory* Adorno wrote:

> Art's double character as both autonomous and *fait social* [social fact] is incessantly reproduced on the level of its autonomy. It is by virtue of this relation to the empirical that artworks recuperate, neutralized, what once was literally and directly experienced in life and what was expulsed by spirit.[20]

While the artwork is formally autonomous, and therefore separate from any social function, the artwork can only be autonomous when it has been commodified as artwork within the frame of social life. We can be reminded of, but at the same time acknowledge the difference of, the photomontages of artists such as Grosz and Heartfield, who put forward photomontage as a form of social critique. In their case the artwork had the purpose of criticism, rather than historical-formal continuity. As such, by acknowledging any given artworks's autonomous character also necessitates a recognition of the historical era in which the art-object was produced.

Fig. 6.5.

Another way that autonomy can be situated is within the political theories of the *Autonomia* movement in Italy in the 1960s and 1970s, when Rossi was beginning to be active. In the West, the 1970s was a period of an emerging post-Fordist worldview, characterised by the interrelated factors of economic and cultural change, along with global political uncertainty and insecurity. In a micro constellation of geopolitical events we can read this general ethos of anxiety. The USSR acquired nuclear weapons in 1949, four years after Hiroshima, then in 1961 Berlin was partitioned West and East, and the Cuban missile crisis in 1962 followed, when Khrushchev placed Soviet missiles in Cuba to offset American missiles in Turkey. In 1975, the US suffered defeat and retreat in the Vietnam War after ten years, while in the UK, Margaret Thatcher became leader of the Conservative Party in 1976, and Prime Minister between 1979 and 1990. In the US, Ronald Reagan was twice defeated Republican presidential nominee in 1968 and 1976, then elected President in two terms between 1980 and 1988.[21]

Fig. 6.6.

Christian Marazzi has commented in *Capital and Affects* that central to the social, economic, and political crises of the 1970s, was the critique of the following. First, the exploitation of workers, and second, the demand for an education to, "provide an alternative to a life sentence to be served on the factory floors."[22] In Marazzi's analysis of the transition from Fordist to post-Fordist production – which is factory to office, later office to university or material to immaterial labour – he writes of the "productive power of language, of the rhetoric defining values and desires."[23] He views the entry of communication and language into the economic sphere as defining this transition. It is notable that Marazzi actively participated in the 1970s Italian intellectual activist movement known collectively, but imprecisely, as *Autonomia*, which became the title of a collection of essays edited by Marazzi himself and Lotringer in 1980.[24]

What is known as *Autonomia*, can be divided into three different moments of political autonomy in Italy. First, *Operaismo* ("Workers") between 1960 and 1968, which was characterised by theoretical production, its key protagonists being Raniero Panzieri and Mario Tronti. Second, *Potere Operaio* ("Workers' Power") between 1967 and 1973, which Antonio Negri developed into the *Autonomia Operaia* ("Workers Autonomy") by 1978. The last period was characterised by political militancy, rather than theoretical speculation. The central thesis of *Operaismo* was formulated by Tronti who argued that industrial capitalism evolved when workers rebelled against their work, not the other way around, and so proposed the "strategy of refusal," as the workers' driving force.[25] Hence workers were active, and capitalists reactive. Although *Autonomia* evolved from *Operaismo* the main difference is that *Operaismo* operated within a communist outlook of politics and power, while *Autonomia* operated within capitalism, and against capitalism. Thus, we see the transition of subjectivity from the industrial worker to the intellectual worker. Knowledge of how poetic experience and cultural work is manifest in the structures of capitalism became the new way to refute capitalism, strategised as, "within and against."[26]

Formal Autonomy

For Vidler, it is Emil Kaufmann who has been the most consistent reference point in the debate on autonomy and architecture.[27] Writing in *Histories of the Immediate Present: Inventing Architectural Modernism* Vidler opens his first chapter on Kaufmann with a statement by Clement Greenberg, which we have already partially cited:

Fig. 6.3.

> I identify Modernism with the intensification, almost the exacerbation, of this self-critical tendency that began with the philosopher Kant. Because he was the first to criticize the means itself of criticism, I conceive of Kant as the first real Modernist.[28]

Vidler then defines the idea of architectural autonomy as the notion that architecture is self critical and bound to an, "internal exploration and transformation of its own specific language."[29] A language of architectural form, based on typological transformation, and a description of that language based on the development of conceptual vocabulary through architectural discourse. Vidler writes that autonomy has surfaced periodically in the modern period, either as a way of classifying architectural form, a *formal autonomy*, or as a way

Hackett, 2002), p. 48. Originally published in 1788.

14. Immanuel Kant, *Critique of Judgement*, ed. by Nicholas Walker, trans. by James Creed Meredith (Oxford: Oxford University Press, 2007), p. 51-52. Originally published in 1790.

15. Clement Greenberg, 'Modernist Painting', in *Modern Art and Modernism: A Critical Anthology*, ed. by Francis Frascina and Charles Harrison (New York: Westview Press, 1988), 5–10 (p. 5). Also refer Clement Greenberg, 'Modernist Painting (1960)', in *The Collected Essays and Criticism: Modernism with a Vengeance, 1957-1969 Volume 4* (Chicago; London: The University of Chicago Press, 1995), pp. 85–93.

16. Greenberg, 'Modernist Painting', in *Modern Art and Modernism*, p. 5.

17. Clement Greenberg, 'Avant-Garde and Kitsch' (1939), in *Art and Culture* (Boston: Beacon Press, 1989), pp. 3–21. Collection of essays first published in 1961.

18. Greenberg, 'Avant-Garde and Kitsch', p.6.

19. Ibid., p. 4.

20. Theodor Adorno, *Aesthetic Theory*, ed. by Gretel Adorno and Rolf Tiedemann, trans. by Robert Hullot-Kentor (London; New York: Continuum, 2002), p. 5. Originally published in Germany entitled *Asthetische Theorie*, 1970.

21. For an extensive discussion on and around this period see Eric Hobsbawm, *Age of Extremes: The Short Twentieth Century, 1914-1991* (London: Abacus, 1995). In particular pp. 225-286.

22. Marazzi, *Capital and Affects*, p. 27.

23. Ibid., p. 124.

24. See Sylvère Lotringer and Christian Marazzi, *Autonomia: Post-Political Politics* (Los Angeles, CA; Cambridge, Mass.: Semiotext(e); MIT Press, 2007). First published in 1980.

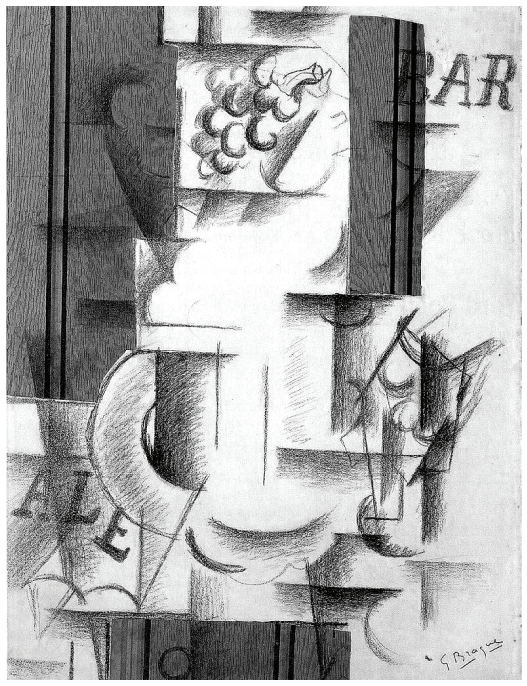
25. See Mario Tronti, 'The Strategy of Refusal' (1965), in *Autonomia: Post-Political Politics*, ed. by Sylvère Lotringer and Christian Marazzi (Los Angeles, CA; Cambridge, Mass.: Semiotext(e); MIT Press, 2007), pp. 28–35.

26. See Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism*. Noting the subtitle.

27. See Emil Kaufmann, *De Ledoux à Le Corbusier: origine et développement de l'architecture autonome* (Paris, 1933); Emil Kaufmann, 'Étienne-Louis Boullée', *The Art Bulletin*, 21 (1939), 212–227; Emil Kaufmann, 'Three Revolutionary Architects, Boullée, Ledoux, and Lequeu', in *Transactions of the American Philosophical Society* (Philadelphia: American Philosophical Society, 1952), xlii, 431–564; Emil Kaufmann, *Architecture in the Age of Reason: Baroque and Post-Baroque in England, Italy, and France* (Hamden, Connecticut: Archon, 1966). First published in 1955.

28. Greenberg quoted in Vidler, *Histories of the Immediate Present* (Cambridge, Mass.: MIT Press, 2008), p. 17.

29. Vidler, *Histories of the Immediate Present*, p. 17.



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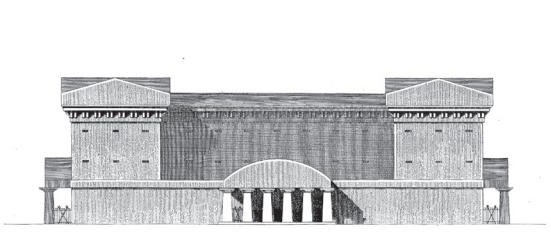

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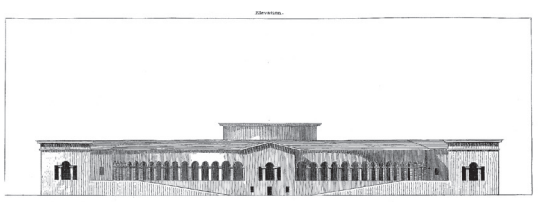


6.8.

6.4. Braque, Fruit Basket, Bottle and Glass, 1912. Held as amongst the first collages, Braque pasted woodgrain wallpaper onto the canvas instead of depicting the grain by painting it. The illusion of depth and actual surface depth coincide, in anticipation of the relief-assemblages in years to come.
6.5. Raoul Hausmann and Hannah Höch at the International Dada Fair, Berlin, 1920. Photomontage developed in the context of collage, but in opposition.
6.6. Hiroshima after the atom bomb of 1945.
6.7. Claude-Nicolas Ledoux, Prison for Aix-en-Provence, c1784. Plan with four inner courts. In formal expression small windows contrast with large empty surfaces and barrel vaulted porches are extruded from the cubic mass.
6.8. Ledoux, Propylaea of Paris, 1787. Four courts divided by a circular gallery, the form of which is duplicated at the centre of the square plan and extruded as a cylinder, just visible in the elevation. Ledoux's projects put forward a formal language of tension and antagonism of mass, surface, and formal opposition.

of defining the role of the architect within the discipline. The idea of autonomy is latent throughout the book, which examines the work of four architectural historians who advanced specific versions of Modernism: Emil Kaufmann's "Neoclassical Modernism," Colin Rowe's "Mannerist Modernism," Reyner Banham's "Futurist Modernism," and Manfredo Tafuri's "Renaissance Modernism."

It is necessary to consider Kaufmann's discussion on the architecture of the Enlightenment. We can turn in particular to his 1933 text, as yet unpublished in English, *Von Ledoux bis Le Corbusier: Ursprung und entwicklung der autonomen architektur*, whose title itself sets out Kaufmann's intellectual programme: the origin and development of architectural autonomy from Claude-Nicolas Ledoux in the 1770s, to Le Corbusier in the 1930s. Kaufmann thus proposed that Modernism began with Ledoux and culminated with Le Corbusier. Guided by Immanuel Kant's concept of the autonomy of the human will as a self imposed moral principle. This human will is also evident in Kaufmann himself, who, during the rise of Nazism, proposed the so called Neoclassical architecture of Ledoux and Schinkel as Modern, in opposition to the Nazi denouncement of the Modern in favour of the Neoclassical. In doing so, Kaufmann provided a form of social critique and at the same time provided an historical dimension to the Modern Movement.

Regarding the moral connotation inherent to this interpretation of autonomy, Damisch reminds us of Adolf Loos' essay "Ornament and Crime," where ornament is associated with a form of crime, and in Le Corbusier's "truth" of appearance.[30] As Damisch puts it, "the rigour and the purity aspired to by the Modern Movement were those of the moral law."[31] This is in keeping with the more general worldview of the Modern Movement social ideology, which, at least between the 1920s and 1930s, focused on work, recreation, housing, and transport. Evident for instance in Le Corbusier's Dom-Ino housing to be built by unskilled labour for mass housing. This links the principle of autonomy back to the idea of equality, implying as Damisch once again puts it, "that all men have the right to architecture."[32] According to Kaufmann, such social thinking was reflected in the "free association of autonomous entities," and that this principle of autonomy is best represented in the plan.[33]

Block and pavilion, column and wall, cube and cylinder, their distribution, their independence, their freedom, tension, autonomy, and formal clarity are retained only within the totality of a plan. Primary importance was given to balanced harmony within a hierarchical order during the Renaissance, particularly on the façade because the façade represented by means of the classical orders, social hierarchy and patronage. In contrast, Enlightenment architecture focused on the plan. It is interesting to read the plans by Boullée and Ledoux in this respect. Geometrical elements such as the square, circle, and triangle repeat as overall compositional apparatuses, within which similar and contrasting forms are repeated, held in opposition, or interlock. Square-plans become cruciform-plans or plans with courtyards as quadrants. Circular courtyards are superimposed within a square-plan or circular-plans are circumscribed by continuous colonnades and walled within a square-plan. These repetitions and antitheses are extruded as volumes and masses. Ornament is reduced and we get blank walls, frameless openings, and flat roofs. The isolation of parts in plan, and their relations are representative of the formal autonomy which Kaufmann described. As Vidler has said, these formal configurations are a clear step away from the preceding Baroque compositional complexity. Architects like Boullée and Ledoux were dissatisfied and so put forward a quasi-functionalist identification of individual parts, more in line with Modernism. It is this paradigm that Kaufmann reasoned Boullée, Ledoux, and others as "revolutionary."[34]

Boullée and Ledoux focussed on geometrical forms as a way to bracket their formal production. This is evident in the following examples: in Boullée's ground plan of his Opera House (1781) which is a cylindrical building with a domed vault; in cenotaphs such as that for Newton (1784), which consists of a sphere rising from a circular plan; other cenotaphs were formed as a truncated pyramid, or truncated cone, or a spiral tower with cubic base. There are many more examples by Ledoux, who for Kaufmann, was "among the first to visualize a new formal ideal."[35] A number of examples include the following: the shelter for rural guards (1780), completely spherical within a sunken base and accessed by four bridges and illustrated on Kaufman's front cover; the Propylaea of Paris (1787) with a drum extruded from a plan that superimposes the square, circle and cruciform; and the project for a Prison at the city of Aix (1784), which is square in plan with four inner courts, six column barrel vaulted porches on each side, with towers at the corners of the cube, and rows of small openings along the blank walls. In these projects we can see the tension of surface and mass, contrasts of volume, and interlocking of geometrical forms.

Fig. 6.7.
Fig. 6.8.

One of the main works of Ledoux is his project for the Saltworks factory at Chaux (1773-74). Conceived to reform social modes of production by realigning the process of making salt to conform to scientific findings, and to shape social behaviour, Vidler has called the project a "paradigm of the managerial environment."[36] There are two plans for this project. The first is a centralised square-plan with enclosed courtyards. Symmetrical in form, the programme is distributed with office and administration adjacent to the entrance portico; workshops, storage, casking and drying rooms to the rear; with accommodation for workers and directors either side of the court. Thus everything was to be contained within a single building. The second plan is radically different. Separate functions are now in detached buildings. The unity of square-plan is abandoned for a semi-circular distribution. Workers housing, workshops and entrance gatehouse are located around the periphery, and the centrally located directors house, which also contains administration offices, is flanked by the two factories. In this scheme, there is the intimation of the panopticon in the directors house, in which managers and directors oversee the workers. At the same time, the second plan becomes a "factory village," as Vidler has put it, with each separate function distinguishable as autonomous entities due to its detached form, even if each form is similar.[37]

Fig. 6.12.
Fig. 6.13.

Kaufmann reads the change from a square-plan in the first project to the isolated distribution of elements within the second project, as the break from Baroque unity to Modern isolation, in parallel to the emergence of individual subjectivity. "Let the elements be free and of equal right," Kaufmann says, "The momentous years which advanced the freedom of the individual brought freedom to the architectural elements as well."[38] This quasi-functional identification of separate elements rather than their unified and hierarchical massing, along with a focus on the plan, was of crucial importance in the turn toward Modernism.

While Kaufmann puts forward a thesis on autonomy and leads us from Ledoux to Le Corbusier, in *Histories of the Immediate Present*, Vidler leads us from Kaufmann and Ledoux via Philip Johnson to Rossi. According to Vidler, Johnson's predilection for Schinkel and Mies is a natural corollary like the formal linkage of Ledoux and Le Corbusier, by Kaufmann. Some years after Johnson's "transparent 'Ledoux' box" Glass House of 1950, Rossi too, as we have said, was reading Kaufmann. Having reviewed Kaufmann's book *Architecture in the Age of Reason* for Casabella-*Continuità* in 1958, a book that investigated the formal principles of, amongst many others, Ledoux, Durand, and Boullée, in 1967 Rossi translated into Italian and wrote an introduction to Boullée's *Essai sur l'architecture.*[39]

Fig. 6.9.
Fig. 6.14.

In his Introduction, Rossi sets out Boullée's system of architectural design, but also, as Rossi writes a, "more general system" for understanding the rationalist tendency. Insisting on the relationship between "logic and art" Rossi writes that Boullée's work is rationalist and autobiographical, a dialogue between a, "systematic didactic approach and the personal need for expression."[40] In the essay, Rossi distinguishes two kinds of rationalism: *conventional rationalism* and *exalted rationalism*. The definitions are developed in the essay, as Rossi writes, using an "analogical approach." We will be speaking in advance of the chapter to come if we discuss this analogical approach, instead, let us here discuss first the rationalist point of view, according to Rossi.

Rossi begins the Introduction by pointing to the logical reading of architecture as an organised series of propositions. We will remember that in his book *The Architecture of the City*, Rossi set out a series of propositions to describe and understand the city. Turning to Boullée, whom Rossi says, "never systematically confronts the issue of urban planning," Rossi focuses on architecture *in vacuo*, as an inquiry into the formal autonomy of architecture,

30. Hubert Damisch, 'Ledoux with Kant', in *Perspecta 33: Mining Autonomy*, The Yale Architectural Journal (Cambridge; London: The MIT Press, 2002), p. 13. This essay was originally published as the preface to Kaufmann's *De Ledoux et Le Corbusier*, 1981, the French translation of *Von Ledoux bis Le Corbusier*, 1931.

31. Damisch, 'Ledoux with Kant', p. 13.

32. Ibid., p. 14.

33. See Vidler, *Histories of the Immediate Present*, p. 29 and pp. 33-34.

34. See Kaufmann, 'Three Revolutionary Architects, Boullée, Ledoux, and Lequeu', p. 434.

35. Ibid., p. 479.

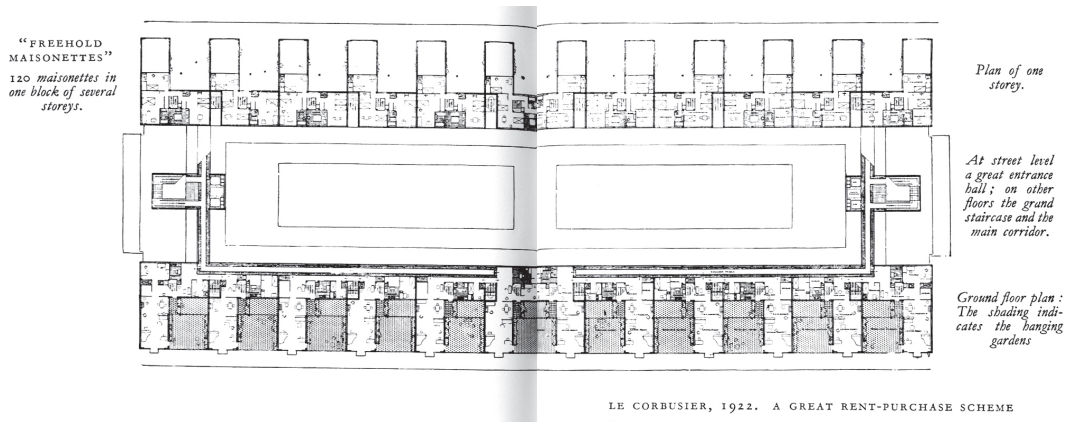
36. See Anthony Vidler, 'Architecture, Management, and Morals: The Design of a Factory Community at the End of the Eighteenth Century', in *The Scenes of the Street and Other Essays* (New York: Monacelli Press, 2011), pp. 149–169. First published in Lotus 1977.

37. Vidler, 'Architecture, Management, and Morals', p. 151.

38. Kaufmann, 'Three Revolutionary Architects, Boullée, Ledoux, and Lequeu', p. 512.

39. See Aldo Rossi, 'Emil Kaufmann e l'architettura dell'illuminismo' (1958), in *Scritti scelti sull'architettura e la città 1956-1972* (Milan: Abitare, 2012), pp. 57–66. Also see Aldo Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49. First published in 1967. Refer *Scritti scelti* pp. 321-338. For the English edition of Boullée refer Etienne Louis Boullée, *Boullée & Visionary Architecture, Including Boullée's 'Architecture, Essay on Art'*, ed. by Helen Rosenau (London; New York: Academy Editions, 1976).

40. Aldo Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49 (p. 41).



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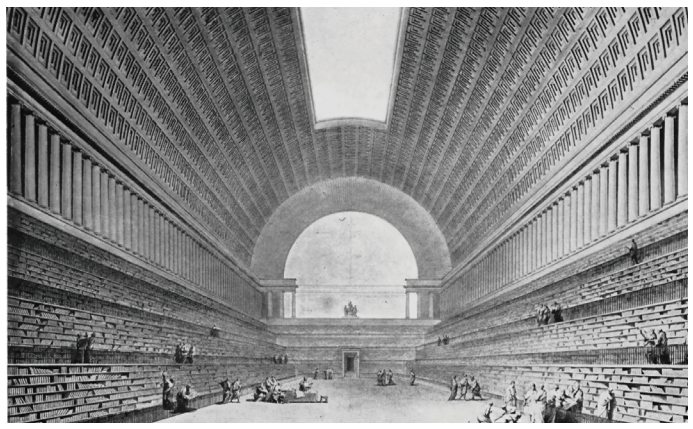

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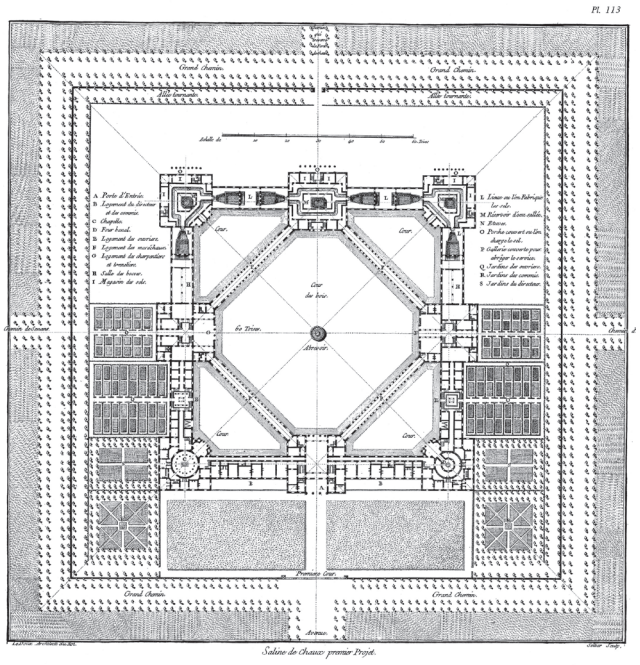

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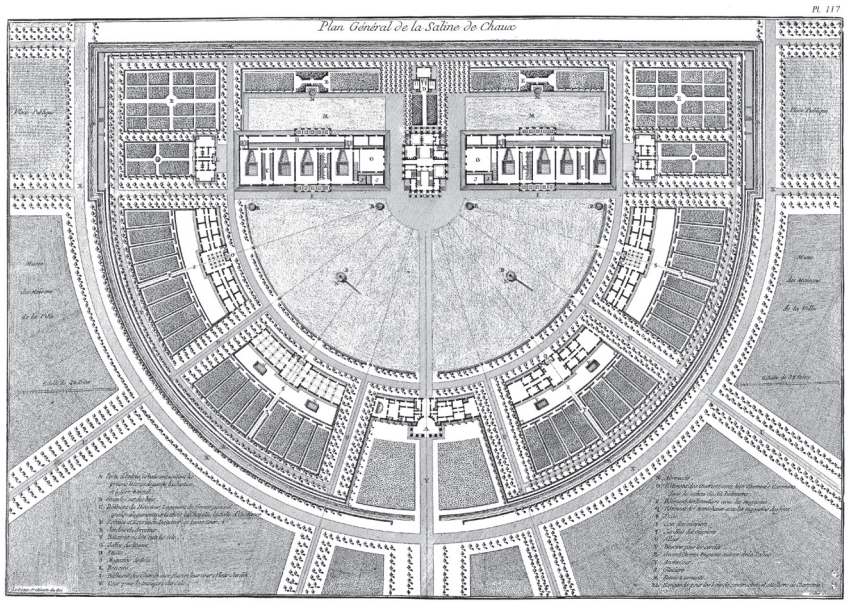

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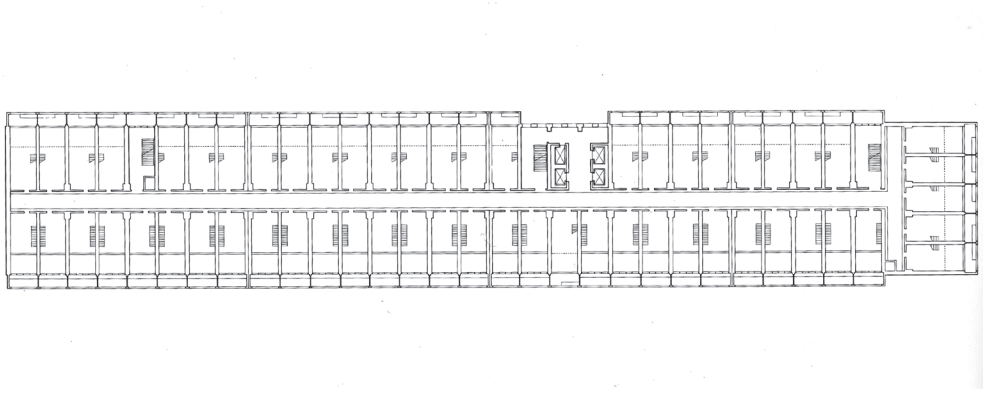

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6.9. Le Corbusier, Freehold Maisonettes, 1922. Five-storey block of mass-housing using mass-production techniques of concrete piers and slabs.
6.10. Etienne-Louis Boullée, National Library Hall, 1785. Vault, colonnade, and amphitheatre stacked one on top of another.
6.11. Raphael, School of Athens, 1509-10. Plato and Aristotle are the central figures. The former on the left with his hand pointing upward to the heavens. The latter pointing downward to the earth. The transcendental and the real in confrontation and Greek thought within the Roman architecture of arches and walls.
6.12-6.13. Claude-Nicolas Ledoux, First and second versions of the Saltworks factory at Chaux, 1773-74. The development of the factory as an institution of control. In the first project, activities are absorbed into a unified, continuous square plan building. In the second, activities are divided and distributed around the site in a managerial and supervisory form, the director at the centre.
6.14. Le Corbusier, Unité d'habitation, Marseille, 1947-52. The central internal street.

distinct from the socio-political aspects of the city.[41] As Rossi says in comparing Boullée and Ledoux, the social concerns in Ledoux are absent in Boullée.[42] Instead, architecture is developed and transmitted by means of its inherent technique of architectural composition: problems of form, type, programmatic and formal distribution, treated logically and communicated as a way of developing architectural knowledge. This is how we can describe *conventional rationalism.*

However, what Rossi uncovers in the essay on Boullée is the intelligibility of *exalted rationalism.* Of how the "emotional referent," which stands outside the conventional rational system, as an originating principle can be communicated. In Boullée, the technical and distributional concerns are set against an architecture of pure imagination. Rossi proposes the following as notable in Boullée's work: an emotional nucleus, the construction of a comprehensive image, technical analysis, and the reconstitution of the work. Boullée's National Library (1785) is put forward as an example to help elucidate these principles.

For Rossi, the emotional nucleus is the element, "linked to the project's thesis from the outset and grows along with it throughout the design process."[43] Rossi quotes Boullée first on his affirmation of the "sublime conception" of Raphael's painting *The School of Athens*, and again on Boullée's description of the library as a, "vast amphitheatre of books."[44] Here we have the composite of two images. First, Raphael's painting which contains the great figures of Greek thought, united within a monumental and horizontally extending vaulted space of Roman architecture. Second, Boullée's image of an amphitheatre of books. The single book, repeated as the defining pattern of the space, elementality coincides with monumentality. These images become the emotional nucleus of Boullée's library, a monument to the immensity of culture.

Fig. 6.10.
Fig. 6.11.

Notably, in Boullée's *Essay* he focused exclusively on public monuments, omitting residential architecture completely. His use of the term *monument* is important because monument, from *memento*, "to remember," is usually used to describe a commemorative building. Instead, monument for Boullée included any public building potentially accessible to all, such as a theatre, library, or museum. This was the basis for Rossi's conception of the monument. However, Rossi also spoke of, on one hand, the classification of the public and private, and on the other, monuments that, "belong to yet another sphere."[45] For Rossi, the monument expressed the permanent and collective values of a given society in form. He said, "character constitutes the evocative, emotional element."[46] As we know from our discussion in the prior chapter on character and the idea of type, it is character that we understand as the expression of ethos, which is the shared customs and common values of any given culture.

However, another understanding can be offered. In *The Architecture of the City* Rossi quotes Loos: "If we find a mound six feet long and three feet wide in the forest, formed into a pyramid, shaped by a shovel, we become serious and something in us says, 'someone lies buried here.' That is architecture."[47] Loos said that only a very small part of architecture belongs to art: the tomb and the monument. In the context of the statement by Loos, the monument can be nothing other than the most reverent, and emotional element. There is thus a tension in the concept of monument. At the urban scale, the monument expresses collective values and ethos, the immensity of culture, and at the same time, the monument reflects the emotional element, of private tragedy, or personal desire. This understanding contributes to the definition of *exalted rationalism* as, on one hand, a confrontation of conventional and exalted rationalism: of problems of form, type, programmatic and formal distribution, and their historical continuity within the discipline. On the other, of the formal in relation to the socio-political demand of any given building type. Yet it is the singularity of the emotional element of any given project as a self-imposed logical principle that Rossi emphasises. This is the decision to put forward a singular architectural language.

While Rossi says that Boullée does not confront the question of the city, in *The Possibility of an Absolute Architecture* Aureli counters Rossi's interpretation and reads Boullée's autonomous architecture as representing the formal character of urban development in Paris in the seventeenth and eighteenth centuries.[48] That formal character can be summarised in the plan of Paris by Pierre Patte (1765). Drawn in such a way as to bring attention to the series of monumental empty spaces that compose the city, and joined together by the streets which depict the horizontally extending elevation which frames them. In the plan we can clearly see the two main urban types of Paris: the *place*, and the *boulevard.* Patte's plan thus pre-empts the modern spatiality of circulation, which is the efficient movement of people and goods distributed through the city, anticipating the axis-principle of Haussmann's boulevards circa 1850, and the territorial extension of Cerdà's Barcelona in 1867.

Fig. 6.15.

Aureli reads Boullée's isolated monuments as the "positive" forms of Patte's empty "negative" *places*. The cruciform-plan Metropolitan Church (1781) is one such "positive." A domed rotunda is extruded and blank walls contrast with a dense wall of columns, the pattern of which is interpreted as the horizontality of the boulevard. The repetition of a small number of elements throughout a building is a constant in Boullée's work. For instance, the column in this case; the book in the National Library; arches at the Coliseum (1782), and doors at the Opera House (1781). A single element becomes part of an overall pattern, just as the repetition of a single window or the continuous rows of trees became the pattern of the Parisian boulevard.

Fig. 6.16.
Fig. 6.17.
Fig. 6.18.

As we have discussed, one of the formal characteristics of autonomy was the juxtaposition of antithetical forms, and the repetition of a single or several elements. When Rossi published his essay on Boullée, he was working on a competition proposal for Scandicci City Hall (1968). In this project formally distinct elements are connected along an elevated walkway. At one end, a courtyard block contains administrative offices. Between these a block containing the mayors office balances on four giant columns and spans between the office block and a block containing the library. A triangular gabled block contains exhibition space and a circular-plan domed council hall is held at a distance and reached from the walkway. In the elevations a single course of stone provides a consistent pattern to each separate element, with openings in the blocks reduced to only a few horizontal bands.

Fig. 6.19.
Fig. 6.20.

What is the emotional nucleus of this project? Given the chronology of the project, we can be tempted to see a close connection with the work of Boullée. We can see this in the following formal characteristics: the off-scale, the juxtaposition of square-plan and circular-plan, the opposition of scales, the isolation of single parts, the image of the project itself as a scale model photographed as a single autonomous form. Rossi collaborated with Massimo Scolari on this project, which brings us to the Milan Triennale exhibition that Rossi curated in 1973 entitled *Rational Architecture* and for which Scolari wrote a comprehensive essay on the idea of autonomy in architecture.

In "The New Architecture and the Avant-Garde" Scolari contrasts the "radical" architecture groups of Archizoom, Superstudio and others against the "rational" architecture of the so called Tendenza.[49] The former rejected history and appealed to open organisational systems with advanced technology as the primary reference. The latter tended toward an historical and formal analysis of the city through typology as a way to link past and present. Scolari puts forward his understanding of the autonomy of architecture:

> For the Tendenza, architecture is a cognitive process that in and of itself, in the acknowledgment of its own autonomy, is today necessitating a refounding of the discipline; that refuses interdisciplinary solutions to its own crisis; that does not pursue and immerse itself in political, economic, social, and technological events only to mask its own creative and formal sterility, but rather desires to understand them so as to be able to intervene in them with lucidity - not to determine them, but not to be subordinate to them either.[50]

As this statement suggests, there is a dialectical principle in the notion of autonomy. First, architecture is to refuse anything that attempts to determine the discipline, such as the political, economic, social, and technological solutions. Architecture is to refuse these interventions because it has its own creative and formal processes, which are in and of itself. Thus any solution should be found in architecture and not in the political, economic, social, and technological. However, as Scolari writes, architecture does not determine these factors, but neither should architecture be determined by them. Architecture interacts with these forces and spatialises them. Here, autonomy is a category that recognises architecture's autonomy from productive forces yet also puts forward architecture's instrumentality in such forces.

41. Ibid., p.47.

42. Ibid., p.42.

43. Ibid., p.44.

44. Ibid., p.44.

45. Ibid., p.44.

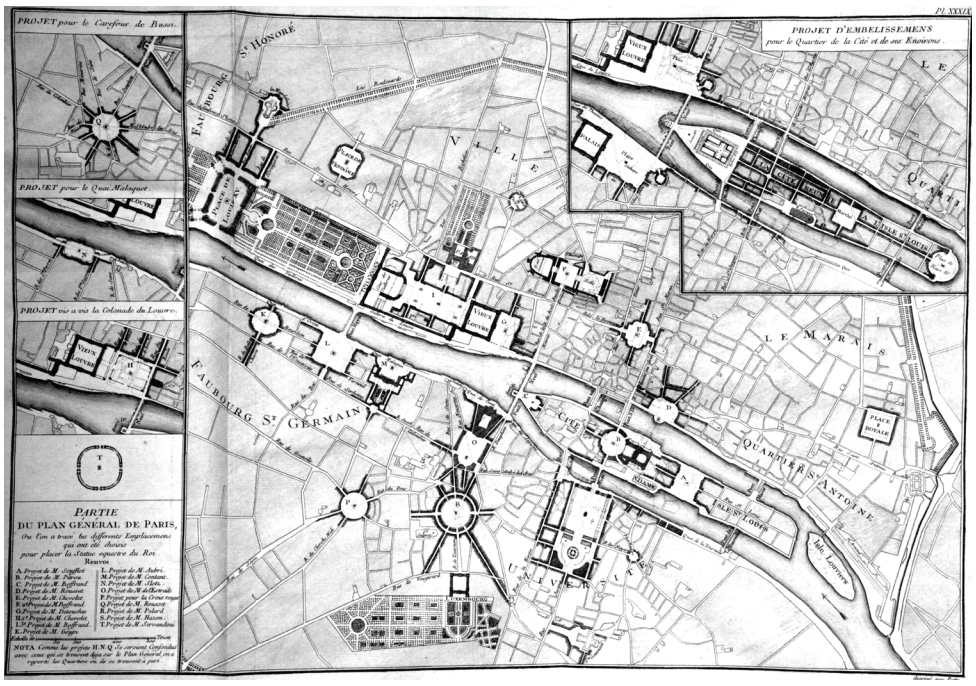
46. Ibid., p.45.

47. The words are those of Loos via Rossi in Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), p. 107.

48. See Chapter 4 in Aureli, *The Possibility of an Absolute Architecture*, pp. 141-176.

49. See Massimo Scolari, 'The New Architecture and the Avant-Garde' (1973), in *Architecture Theory Since 1968*, ed. by K. Michael Hays, trans. by Stephen Sartarelli (Cambridge, Mass: MIT Press, 1998), pp. 124-145. The Tendenza was subject to an exhibition at Pompidou in Paris, between June and September 2012. It is notable that the original collage panel by Rossi for the Analogical City was displayed. Refer Frédéric Migayrou, ed., *La Tendenza: Italian Architectures / Architectures Italiennes: 1965-1985* (Paris: Centre Pompidou, 2012).

50. Scolari, 'The New Architecture and the Avant-Garde' (1973), in *Architecture Theory Since 1968*, pp. 131-132.



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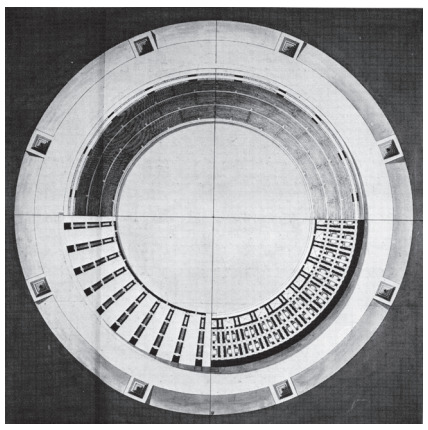

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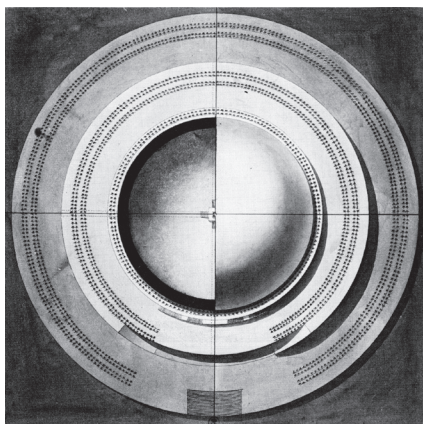

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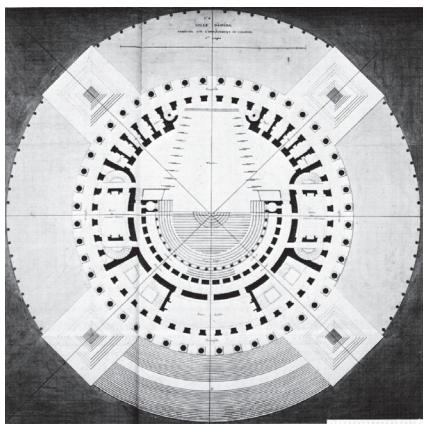

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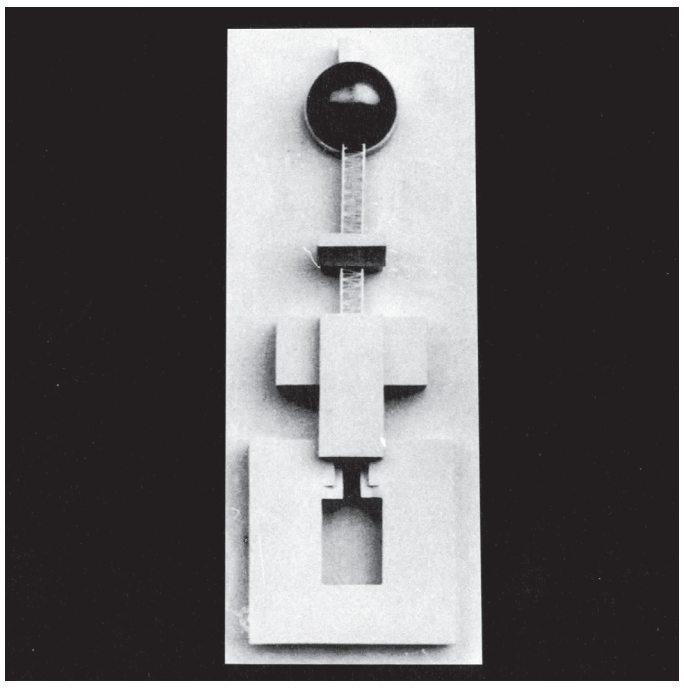

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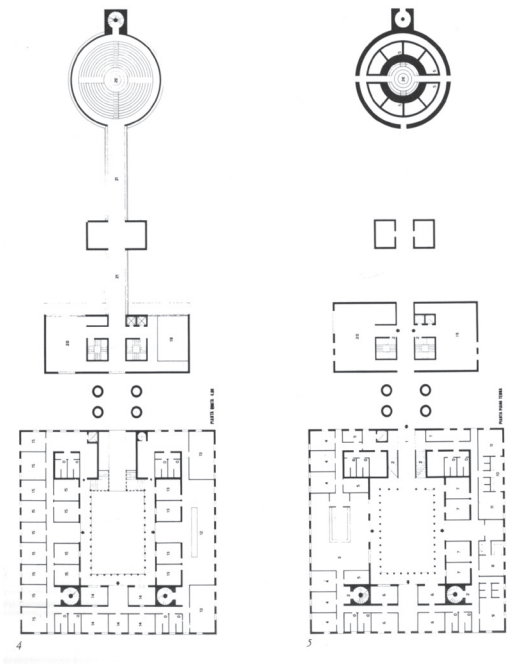


6.20.

6.15. Pierre Patte, Plan of Paris, 1765. Patte's plan brought together various projects submitted for the embellishment of Paris including the siting of a statue of Louis XV. In the solid line technique for depicting the projects, Patte also represents the linear boulevards, radiating avenues, and open squares as key urban types emerging in the Enlightenment city, anticipating the strategic cutting up of Paris by Haussmann's Boulevard's.
6.16-6.18. Boullée, Circular plans. From left: Circus (1782), Newton Cenotaph (1784), Opera Theatre (1781). Boullée's singular and autonomous forms seem to interlock within the voids of Patte's plan of Paris.
6.19-6.20. Rossi and Scolari, Scandicci Town Hall, 1968. A project undertaken at the same time Rossi was translating Boullée's Essai. At Scandicci, a sequences of singular forms are isolated and held in tension. Hall, pavilion, over scaled columns, and courtyard are formally and typologically distinct but connected by an upper floor bridge.

It follows that when Scolari discusses architecture as a cognitive process, he points to the logic of typology as a way of reasoning about architecture. It is the process of typological thinking that forms are produced which are specific to the discipline of architecture, distinct from all that is not architecture. Thus, once again we see the idea of autonomy in architecture discussed in relation to the idea of type and importantly as the production of knowledge.

It is interesting to note that the group of architects who positioned themselves within the Tendenza and around the theme of autonomy interacted with the idea of history in architecture and at the same time were critical of history. They opposed the anti-historical megastructural expression popular at the time with Tange, Quaroni and others. The Tendenza also opposed the functionalist determinism of the Modern Movement. Yet, the architectural expression put forward by the architects of the Tendenza, such as Giorgio Grassi, as well as Rossi, clearly express something of the Modern Movement aesthetic tendency. Through the notion of autonomy, a critical engagement with the Modern Movement as part of an historical determined sensibility is proposed.

Fig. 6.25.

Scolari concludes his essay on the Tendenza with a short excursus on what he calls a theory of composition. Beginning with the category of monument, he follows Rossi and says that the monument is the, "physically and psychologically pivotal point" within the city as an artefact.[51] Rossi has said that monuments are fixed points in the biography of the city, and are signs of the collective memory of the city expressed through architecture.[52] This proposition is situated within the thesis of Maurice Halbwachs whom Scolari refers to and writes that typicality is the characteristic of urban reality and of collective memory. The monument opposes the private city, the demand for the new, the consumable. It opposes novelty. Rather, the monument expresses something of the common culture through typological form.

Let us summarise what we have discussed to this point. The notion of autonomy puts forward a discussion of architecture as a discipline of its own, and as an autonomous category of reality. That architecture has its own formal language of type, and discursive language of theoretical categories. That architectural form and the role of architecture in the city is as much a product of historical presence, of form understood by types, as of social and political concern. Autonomy is the idea of a "self-critical" architecture, and of an architecture that has its own rules, and conventions, that can be transmitted through common principles, canonical precedents, and past examples to develop the discipline of architecture as an autonomous body of knowledge.

Project, Confrontation, and Serial Production

Fig. 6.26.
Fig. 6.27.

1973 is a significant date because it is the year that saw both the *Rational Architecture* exhibition by Rossi, Scolari, and others mentioned above, and also the publication of *Progetto e Utopia* by Manfredo Tafuri, translated later as *Architecture and Utopia*.[53] Of the latter we can note the difference in each title, "Project" has been translated as "Architecture." For Tafuri, *project* was a conceptual category put forward in its clearest sense in the introduction to *The Sphere and the Labyrinth*.[54] Tafuri viewed architecture as a single *historical project* constituted by the dialectic of *longue durée* and *histoire événementielle*. The former standing for "long duration," the gradual historical shifts, viewed as an ongoing process. The latter for the short, sharp, explosive "events," the pulses of uncertainty, interruption, unrealised intensions within the *longue durée*. The historical project of architecture, for Tafuri, was a "project of crisis" with no origin, no solution, only a constellation of different practices and ideas, material and immaterial products.[55] Tafuri wrote the following:

> By this standard, architectural history will always seem the fruit of an unresolved dialectic. The interweaving of intellectual models, modes of production, and modes of consumption ought to lead to the 'explosion' of the synthesis contained in the work. Wherever this synthesis is presented as a completed whole, it is necessary to introduce a disintegration, a fragmentation, a 'dissemination' of its constitutive units.[56]

With this in mind, the disintegrated components were subject to separate analyses with the view of recomposing these fragments, only for the next moment of shock to produce the necessary disintegration, and eventual reintegration. The political theorist Massimo Cacciari, a professor of aesthetics at the Institute of History at IUAV worked alongside Tafuri, and put forward a reading of the term project as intrinsically productive. He notes that *producing* and *project* are joint terms so that the project foresees a "future presence."[57] So the historical project of Tafuri, is also tied to the future projection of architectural and ideology.

Prior to the publication of *Architecture and Utopia*, Tafuri moved from Rome to Venice in 1968 to teach history at IUAV, where he founded the Institute of History. Rossi had already operated in Venice between 1964 and 1966 and in the years after 1970 in the position of Professor of Architectural Composition. Tafuri held a critical view on the autonomy of architecture, and between Rossi and Tafuri we have two interesting positions. Although Tafuri started his career as an architect and undertook a number of large scale planning proposals, as we have said with AUA, he turned from architectural practice to the practice of history. For Tafuri, the work of the historian was separate from the work of the architect. The historian, for Tafuri, should take a dialectical role in relation to the architect, "almost to the point of constant opposition," as he put it in *Theories and History of Architecture*.[58] Tafuri said that the historian should know as much as the architect while turning that knowledge to different ends. The role of the historian was historical criticism, the role of the architect was architectural production. The former an abstract survey, the latter a precise poetical tendency. Both points of view instrumentalise the discipline of architecture but in different ways and for Tafuri, should not be mixed because it is the conflict of things that is productive.[59]

In *Architecture and Utopia*, Tafuri reads modern architecture since the Enlightenment through the method of historical criticism. He puts forward a broad understanding of the relation between architecture and the socio-economic and political situation, of the architect in relation to labour and subjectivity, and of architecture within the sphere of capitalism. Tafuri posited architecture as an instrument of capitalist development used by regimes of power. He proposed that capitalism had taken away ideology from architecture, and the role of the architect as an "active ideologist."[60] Thus Tafuri put forward that architecture return to the "sublime uselessness" of pure form without utopia.[61]

It is interesting to note the drawing on the front cover of the American edition of *Architecture and Utopia* which is by Rossi and repeated as the final illustration. Titled *L'architecture assassinée, a Manfredo Tafuri* it depicts the collapse of the city, representing Rossi's thinking that the disciplinary limits put forward by Tafuri, that historians do history and architects do architecture, is the death of architecture. The emphasis on the specialisation of roles within the discipline of architecture (such as criticism, design, history, planning) leads to division and fragmentation. It implies that the complexity of the city can only be tackled in an aggregatory and piecemeal way by specialised operators. What Rossi emphasised was the enlarging of the conceptual limits of architecture within the discipline of architecture. He put this forward as the proposition that the city is itself architecture, uniting the two terms city and architecture.[62] Thus, while Rossi held that architecture was an autonomous category of reality, Tafuri, on the other hand, held architecture as a subset of reality, because it operates within the realm of power and economy which more than anything determine architecture. Recently, Reinhold Martin has revisited this notion to claim that it is, by contrast, architecture that makes power real.

In *Utopia's Ghost: Architecture and Postmodernism, Again*, Martin takes the view that architecture, as part of global culture, reflects contemporary conditions of production, and at the same time guides them.[63] The seven main chapters are titled thus: "Territory," "History," "Language," "Image," "Materiality," "Subjects," "Architecture." Each has a descriptive subtitle, so

51. Scolari, 'The New Architecture and the Avant-Garde', p. 140.

52. See Rossi, *The Architecture of the City*. In particular see pp. 126-131, and pp. 162-163. Also refer Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 14–25.

53. Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development*, trans. by Barbara Luigia La Penta (Cambridge, Mass.: MIT Press, 1976). First published in Italy under the title *Progetto e Utopia*, in 1973.

54. See the Introduction entitled "The Historical Project" in Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-gardes and Architecture from Piranesi to the 1970s* (Cambridge, Mass.: MIT Press, 1990). First published in Italy, 1987.

55. Tafuri, *The Sphere and the Labyrinth*, p. 13. See also Marco Biraghi, *Project of Crisis: Manfredo Tafuri and Contemporary Architecture*, trans. by Alta Price (Cambridge, Mass.: MIT Press, 2013).

56. Tafuri, *The Sphere and the Labyrinth*, p. 14.

57. See Massimo Cacciari, *The Unpolitical: On the Radical Critique of Political Reason*, ed. by Alessandro Carrera, trans. by Massimo Verdicchio (New York: Fordham University Press, 2009), p. 122. This book is a collection of Cacciari's essays written between 1978 and 2006.

58. Manfredo Tafuri, *Theories and History of Architecture*, trans. by Giorgio Verrecchia (London: Granada, 1980), p. 64. Originally published in Italy under the title *Teorie e storia dell'architettura*, 1968.

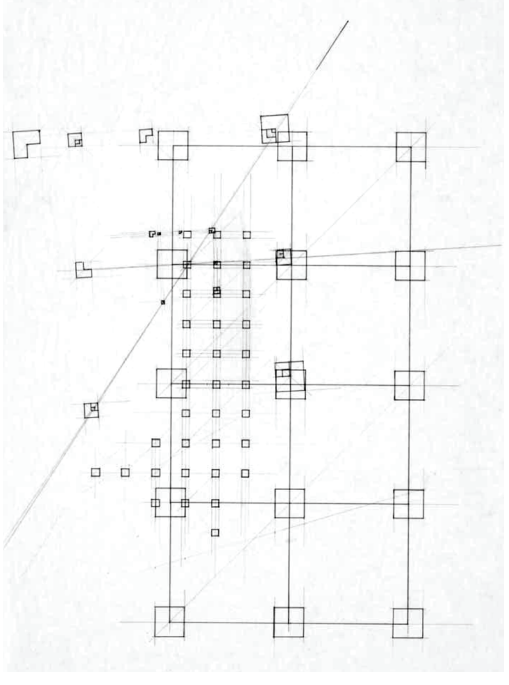
59. See for example Tafuri, *Theories and History of Architecture*, p. 141; and Tafuri, *The Sphere and the Labyrinth*, p. 3.

60. Tafuri, *Architecture and Utopia*, p. 176.

61. Ibid., p. ix.

62. Rossi, *The Architecture of the City*, p. 21.

63. Reinhold Martin, *Utopia's Ghost: Architecture and Postmodernism, Again* (Minneapolis: University of Minnesota Press, 2010).



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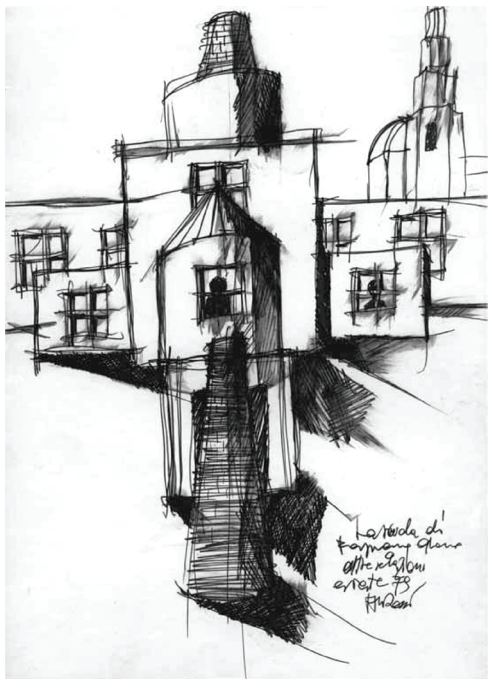

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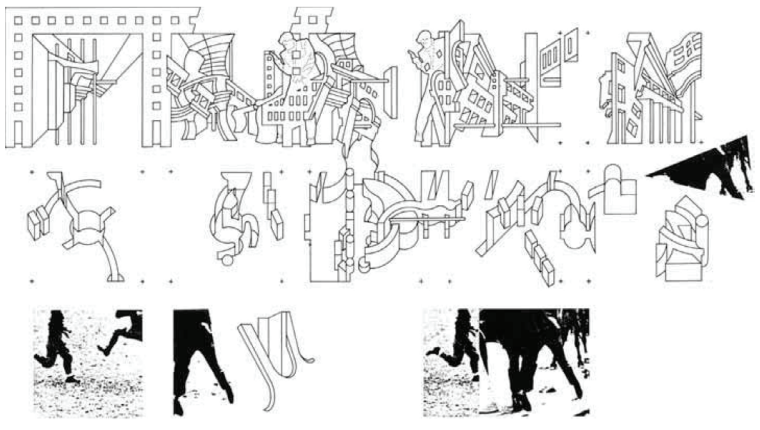

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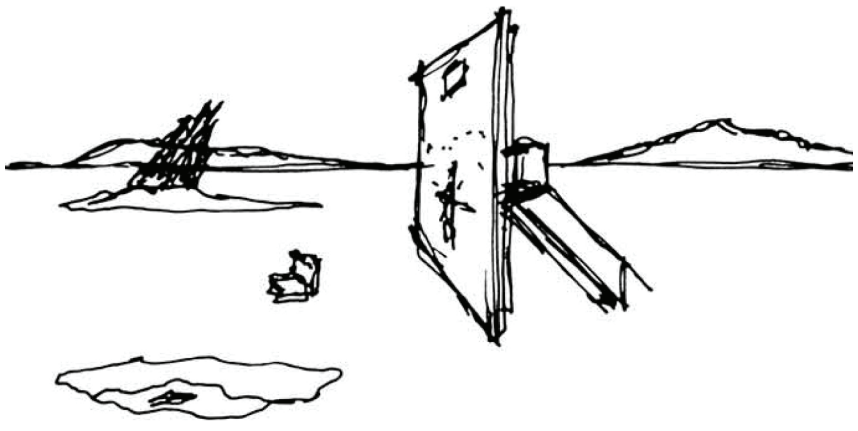

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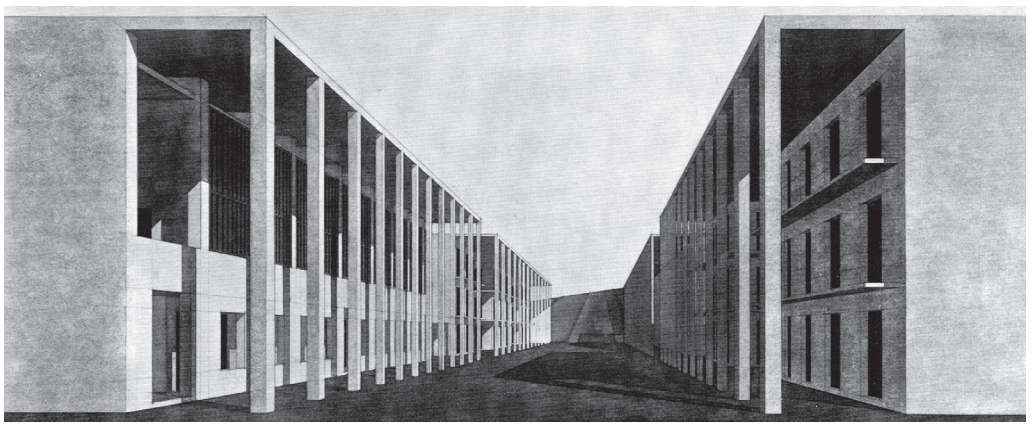

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6.21. Peter Eisenman, Sketch diagram of two grids superimposed at different scales for Cannaregio Project, 1978.
6.22. Rossi, Study of Fagnano Olona School, 1979.
6.23. Bernard Tschumi, From Manhattan Transcripts, 1976-81.
6.24. John Hejduk, Sketch of a wall set in a landscape.
6.25. Giorgio Grassi, Students Hostel, Chieti, 1977. View along central colonnade. The most general image is also the most comprehensive and profound.
6.26. Rossi and others, Architettura Razionale,1973. Exhibition catalogue for the Triennale. One of the aims of Tendenza was to influence schools of architecture through urban research. The catalogue included theoretical texts and projects by Modern Movement figures such as Hilberseimer, Meyer, and Le Corbusier, along with those of Scolari, Bonfanti, Rossi and others.
6.27. Manfredo Tafuri, Architecture and Utopia, 1973. Front cover of American edition from 1976.

for instance, “Territory” is subtitled, “From the Inside, Out,” and “Image” is subtitled, “Have We Ever Been Postmodern?” Like Tafuri, Martin brings disciplinary debate about the autonomy of architecture into the wider socio-political realm. He writes that architecture offers, “an interpretive guide in grasping a rearrangement of the terms governing the interaction of culture, politics, and capital in the latter part of the twentieth century.”[64] Martin explains his interpretive apparatus as the axis of representation and production, which architecture intersects. A reciprocal and overlapping axis of immaterial production and aesthetic experience. Martin argues that architecture becomes political through engagement with external forces such as, clients, states, governments, users, and publics. This is his axis of production. The axis of representation includes architectural discourses, processes, and techniques. “Here” he writes, “architecture, as a form of ‘immaterial production’ fully materialised, stands at what we can call the crux of postmodernism, operating simultaneously along an axis of representation and an axis of production.”[65]

In Martin’s provocatively titled book, he raises two challenging topics: utopia, and postmodernism. For Martin postmodernism is not a style, or understood in a conventional imagistic way. Rather, postmodernism is understood as a discursive formation and as part of a global phenomena that continues to structure architecture’s relationship to the various forces of power. Architecture is the spatialisation of postmodern thinking which is tied to late capitalist culture. As Martin says in his Introduction, “architecture makes power real, rather than the other way around.”[66]

It is in the Introduction that Martin focuses on autonomy.[67] Utopia is the opposite of autonomy, and stands for a system of representation and production, “no longer available to architecture.”[68] Martin writes of the “precarity” of autonomy, and that the refusal by architects to engage with conditions of production, leads to the surrendering of influence on contemporary life and the development of the city.[69] He views architecture’s retreat into formal autonomy as a turning away from the societal realm, a denial of architecture’s complicity with power and politics, and a withdrawal from engagement in these forces. Instead, he says, it is necessary to reengage with “utopian thinking.” Or put in the language of Tafuri, for architects to become “active ideologists.” In a sense to reverse Tafuri’s proposition. However, Martin’s discussion relies on the thesis of formal autonomy put forward by Eisenman, which focuses on formal investigations liberated from the socio-economic and political realm. As Eisenman has said, “Any internally generated forms that are part of a critical system in one sense could be considered as autonomous, independent of social or market forces, while still offering a critique of these forces.”[70]

To be sure, Eisenman, like Rossi, were both committed to architecture as a discipline with a body of knowledge, and emphasised the formal aspects of architecture. Both held the view that architecture is a category of reality, and should thus be autonomous. However, for Rossi, the formal and the political are interrelated through the idea of type, which provides a formal-historical urban critique and a criticism of the discipline with a view to its transformation. While for Eisenman, it is not urban types that provide an instrument of criticism but sequential syntactical studies, derived from grids, cubes and other geometrical formal reductions, intentionally separate and disengaged from the socio-political condition. As part of the so called New York Five, we need only refer to the publication of *Five Architects* in 1975, for the idea of autonomy that Eisenman proposed: free-standing villas rather than the city, the aesthetic project of the Modern Movement rather than its social project, Villa Savoye rather than Unité d’Habitation.[71] Now that we have crossed State-side, so to speak, first with Martin and now Eisenman, let us continue for a moment with Michael Hays.

Eisenman is one of four architects that Hays discusses as part of the “late avant-garde” in his 2010 book *Architecture’s Desire: Reading the late avant-garde*. In this book Hays applies Jacques Lacan’s psychoanalytic model of the Imaginary-Symbolic-Real as an interpretive approach to focus on architecture as formal representation and the construction of subjective positions. Hays writes in the opening page that architecture is a, “specific kind of socially symbolic production whose primary task is the construction of concepts and subject positions rather than the making of things.”[72] The book itself is situated within, as Hays writes, the expanded decade of the 1970s which is inclusive of the years between 1966 and 1983. It deals with a close reading of four architects whose work, according to Hays, can “think philosophical problems through architecture.”[73] Hays selects the work of Aldo Rossi, Peter Eisenman, John Hejduk, and Bernard Tschumi, with a brief excursus on Rem Koolhaas embedded in the final chapter on Tschumi. These are the architects that Hays describes as the “late avant-garde.” Hays’ thesis is that architecture “desires” to be autonomous, and that it is through the work of the late avant-garde that this desire for autonomy came closest to being real. He says that the “metonymy” of architecture’s desire is: analogy, repetition, encounter, spacing. Each component is developed in the four chapters on the different architects.

Hays maps Lacan’s model onto each architect in question and theorises the work of that architect using themes developed in their own work, type and analogy in the case of Rossi. With other theoretical sources such as Jameson’s category of “transcoding,” Hays develops “Desire” as a category to understand the idea of autonomy.[74]

In *Architecture’s Desire*, which is one of a number of texts in which Hays discusses autonomy, he puts forward that Rossi, Eisenman, Hejduk, and Tschumi, look to the “generative grammar” of architecture, and architecture’s “interiority.”[75] By doing so, these architects sought to understand and systematise architectural language based on the formal capacity of architecture, as separate and distinct to all other kinds of language. Rossi’s typology project, Eisenman’s transformation of the grid, Hejduk’s obsession with the wall, and Tschumi’s drawings, are examples of specifically architectural theorisations, elements and notational devices which provide architecture with a formal-linguistic and disciplinary-specific autonomy. However, the reading of autonomy that Hays offers is complicated by his use of Lacan’s interpretive apparatus, which is mapped to each architect thus: Rossi’s typological Imaginary, Eisenman’s Symbolic grids performed through formal operations such as tracing, repeating, and diagramming, Hejduk’s wall as screen/mask where the Real interacts with the Imaginary, and in Tschumi’s work which the Real and Symbolic become privileged as Desire is revealed through the production of events.

Hays’ reading of autonomy can be situated in a number of earlier writings that to a large extent are clearer than *Architecture’s Desire*, such as “Critical Architecture: Between Culture and Form” and his first book *Modernism and the Posthumanist Subject*.[76] In “Critical Architecture,” Hays writes on one hand, that architecture is an instrument for the continuity of culture, and on the other, that architecture is autonomous form, understandable as a system of formal operations. The former view emphasises culture as the content of built form, and depends on social, economic, political and technological processes. The latter concerns the formal operations of architecture, how buildings are composed, and how architectural form is viewed within its own internal system, which is absent of history. With the “absence of historical concern,” as Hays puts it, we assume that he posits a largely abstract formal system of autonomy in line with that of Eisenman.[77] Hays proposes *critical architecture* as a mediating position, described as “resistant” and “oppositional.”[78]

As an example of critical architecture, Hays proposes the architecture of Mies van der Rohe. One example which Hays discusses is the IIT Campus in Chicago, juxtaposed with a photomontage by Max Ernst from his collage novel *La femme 100 têtes* (“*The Hundred Headless Woman*”).[79] Ernst’s collage novel comprises city scenes using images from eighteenth-century books and magazines, onto which other figures are montaged. The result are scenes which are “incommensurable but interlocked.” For Hays, there is something of this quality in the work of Mies: “... the motivated, the planned, and the rational are brought together with the contingent, the unpredictable, and the inexplicable.”[80] Illustrating Hays’ example is a view of the IIT Campus, in which a photograph of the scale model is montaged onto an aerial view and we can see the singularity of architectural form with the blocks distributed carefully around

Fig. 6.21.
Fig. 6.22.
Fig. 6.23.
Fig. 6.24.
Fig. 6.28.
Fig. 6.29.

64. Martin, *Utopia’s Ghost*, p. xvi.

65. Ibid., p. xvi and also p. 163.

66. Ibid., p. xiv.

67. Ibid. The notion of autonomy is raised directly in the chapters “Language” and “Subjects.”

68. Ibid., p. xvii.

69. Ibid., p. 40.

70. Eisenman, ‘Foreword: [Bracket]ing History’, in *Histories of the Immediate Present*, p. viii.

71. See Peter Eisenman and others, *Five Architects: Eisenman, Graves, Gwathmey, Hejduk, Meier* (New York: Oxford University Press, 1978). First published in 1975.

72. K. Michael Hays, *Architecture’s Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010), p.1.

73. Hays, *Architecture’s Desire*, p. 2.

74. The key references for Hays here are Fredric Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (London: Methuen, 1986). First published in 1981. See in particular Chapter 1, “On Interpretation.” Also refer Jacques Lacan, *The Four Fundamental Concepts of Psycho-Analysis*, trans. by Alan Sheridan (London: Penguin, 1994). Published first in France, 1973.

75. Hays, *Architecture’s Desire*. See pages 6, 32, and 52 for examples.

76. See K. Michael Hays, ‘Critical Architecture: Between Culture and Form’, *Perspecta*, 21 (1984), 14–29; and K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer* (Cambridge, Mass.: MIT Press, 1995). First published in 1992.

77. Hays, ‘Critical Architecture’, p. 16.

78. Ibid., p. 17.

79. See Max Ernst, *The Hundred Headless Woman / La Femme 100 Têtes*, trans. by Dorothea Tanning (New York: George Braziller, 1981). First published in 1929.

80. Ibid., p. 26.

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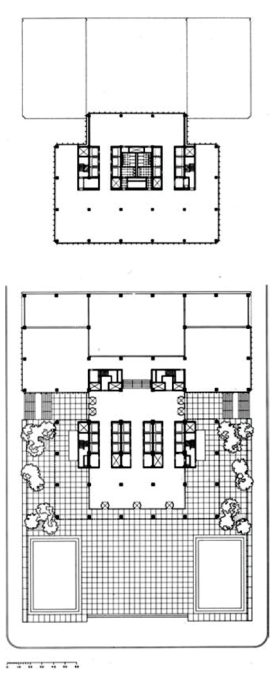

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6.28. Max Ernst, From The Hundred Headless Woman, 1929. Collage of an incommensurable but interlocked city scene.
6.29. Mies van der Rohe, IIT Campus photomontage, 1939. Spatial intricacy of the Barcelona Pavilion at the urban scale. The montage represents a new compositional layout grafted onto the chaos of Chicago's South Side.
6.30. Rem Koolhaas, City of the Captive Globe, 1972. The order of the urban layout allows a multiplicity of competing powers to maintain their autonomy and confront the flows of the city.
6.31. Mies van der Rohe, Toronto-Dominion Centre, 1963-69. Separation from the city and containment by the city.
6.32-6.33. Mies van der Rohe, Seagram Building, 1954-1958. The plinth as political form. Through its self-limiting form, the plinth counters the flow of the city. Using generic architectural and corporate elements such as standard steel sections, the curtain wall, plinth, and corporate fountains, Mies' buildings are both part of the city, yet separated from the city.

the campus, resisting the surrounding irregularity of Chicago's South Side in a formal opposition.

To help understand critical architecture, Hays proposes the category of *authorship*. He writes that from Mies' skyscraper project of 1922 to the Barcelona Pavilion, Mies' programme of architecture was a persistent rewriting of a few themes: unitary form, surface transparency, spatial and material contrast. "Repetition," for Hays, "demonstrates how architecture can resist, rather than reflect, an external cultural reality."[81] We can say that repetition, or alternatively *serial authorship*, is the willed commitment to delineate, to refine, to rearticulate, a precise formal language, an entire architectural project, within the given cultural condition.

The notion of seriality is also clear in the work of Rossi. In "Architecture for Museums," Rossi wrote that the subjective element in architecture, as in the political, is a creative moment based on a decisional element.[82] The beginning of a theory is the insistence of certain themes to follow and try to solve the same problem. Rossi says that this insistence is also the sign of the autobiographical coherence of the artist, writing that it is only a fool who starts back at the beginning. Rather, it is necessary to continuously follow the path of our own experience, not to begin from scratch.[83] This decision is what is meant by *tendency.* The decisional element as a specific moment of subjectivity. As Rossi puts it, "An architecture that lacks a tendency has neither a field nor a manner in which to reveal itself. In constructing a theory of architecture, the relationship with history is also one of choice."[84] We choose to understand history because the present is historically determined.

Let us briefly compare two unbuilt projects by Rossi for the city of Trieste in Italy, undertaken as competitions in 1974. The first, for Trieste City Hall, is planned around three square-plan halls covered by three glazed pitched-roofs, and connected at ground floor level, but separated on upper floors by a series of circulation cores. These contrast with the long blocks which contain offices. The project is built on a two-storey plinth with a central flight of steps on the waterfront side of the building. The repeated square openings recall those of Gallaratese and San Rocco, which we can remember from prior chapters. The second, a Student Hostel, takes one square court of the City Hall and sets it apart from four linear three-storey wings supported above the ground by thin columns. The square courtyard contains the administrative and communal services such as dining hall, bar, and library, while the wings contain the private student rooms. Extending from the main building, the rooms are accessed via linear elevated walkways, with further walkways running transversely to connect each block. In the repetition of a few elements from project to project, their transformation from preceding to succeeding project we can put forward the category of seriality – authorship – as a characteristic of formal autonomy.

Fig. 6.34.
Fig. 6.35.

Political Form and the Agonistic Principle

We opened this chapter by situating autonomy in a number of ways. One of which was in the Italian intellectual activist political movement known as *Autonomia.* In the previous section we elaborated a view of the autonomy of architecture as architecture's interactivity with social, political, and cultural production, via discussions on Tafuri, Martin, and Hays. Let us now turn to Pier Vittorio Aureli, whom in a number of texts, seeks to articulate the relationship between architecture and the political, as political form. In *The Project of Autonomy: Politics and Architecture within and against Capitalism*, Aureli provides an historical account of the relationship between autonomy in political theory, to architecture.[85] Although Aureli begins with a discussion of the Greek-French philosopher Cornelius Castoriadis who dates political autonomy with the invention of modern politics during the Renaissance and the autonomous city-states of that era, Aureli's discussion focuses on the 1960s and 1970s *Autonomia* movement. He composes the voices of, amongst others, political theorists Raniero Panzieri and Mario Tronti, with architects Aldo Rossi and the group Archizoom, with their various "projects of autonomy," but understood as a single project. Although Rossi and Archizoom represented opposing schools of thought (*Tendenza*, and *Architettura Radicale*), they share the common position of theorising a project which was alternative to the one imposed by capitalist reality. Aureli reconstructs the "political and poetical imagination" that unfolded in Italy during this period, and elaborates Rossi's concept of *locus* as a political category to describe the singularity of form as geographic locus, in opposition to the open-form notion of "city-territory."

Aureli's autonomy thesis is advanced in his book *The Possibility of an Absolute Architecture*.[86] Aureli proposes an engagement with the city through a formal consciousness of architecture as the confrontation of architecture with the city.[87] For Aureli, architecture possesses the social and cultural power to produce representations of the world through, "exemplary forms of built reality."[88] So it is through architectural form that we confront reality. Aureli's thesis is that "absolute architecture" resists the process of urbanisation and at the same time incorporates the city. Aureli writes that it is the condition of architectural form to separate and to be separated. In this act of separation, architecture reveals the essence of the city, and the essence of itself as "political form." He quotes Hannah Arendt's discussion on the idea of Greek *nomos* (for laws), who writes:

> The *nomos* limits actions and prevents them from dissipating into an unforeseeable, constantly expanding system of relationships, and by doing so gives actions their enduring forms, turning each action into a deed that in its greatness - that is, in its surpassing excellence - can be remembered and preserved.[89]

Aureli writes that *nomos* was seen as a conceptual frame for politics, a necessary precondition, but not an object. Instead *nomos* is law that frames political action, "within a defined spatial form that coincides with the walled perimeter of the city and the distinction between public and private space."[90] Thus, it is the process of separation inherent to architectural form that the political is manifest. Before moving forward, it is interesting to note a statement by Rossi which reads very similar to that by Arendt:

> After arriving at its own specificity through its relationship with different realities, *a form becomes a way of confronting reality*, a way in which land is divided, for example, or the nature of a house established within a certain historical framework. In architecture such form has the value of law, with its own autonomy and its own capacity to impose itself on reality.[91]

Proceeding again with Aureli, *The Possibility of an Absolute Architecture* itself begins with a discussion of the city as political form and Aureli analyses the rise of urbanisation as a capitalist phenomena. This is situated within the Greek *polis* in which Aureli describes the origins of the city as political form as the dialectic between the collective space of the agora, and the economic space of the private house, together producing a democratic but "agonistic" territory. Aureli argues that it is the private sphere which has come to dominate the urban condition, and with it the rise of urbanisation. Concurrently, Cerdà's plan for the extension of Barcelona is analysed. Cerdà's plan emphasised circulation and extended the urban infrastructure beyond the symbolic centre of the city, in favour of unlimited growth. Aureli discusses Hilberseimer's High-Rise City, Archizoom's No-Stop City, and Koolhaas' City of the Captive Globe, all of which, for Aureli, represent "paradigmatic" examples of urbanisation.

Concluding the first chapter is an analysis of the plinth element in the work of Mies, as an example of the actuality of political form. In particular, the plinth is a specific architectural element which contrasts with the surrounding urbanisation, reorganising the relationship between the building and the wider city, and delineating a specific limit. The plinth defines that which is placed on it, and that which is left outside it, so that the plinth allows a separation from the flows of the city, and at the same time confronts the flows with a specific form. It is thus a spatial and formal element of separation, raised to the level of political principle. The plinth can be compared to Rossi's concept of locus that counters the prevailing process of urbanisation and by extension, capitalist development.

Fig. 6.30.
Fig. 6.31.
Fig. 6.32.
Fig. 6.33.

Aureli proceeds in the main chapters to analyse the work of four architects whose projects express something of the city, but were advanced as singular architectural forms that resisted what became known as urbanisation. Using the archipelago as a conceptual framework, the analyses are viewed as singular islands within the sea of urbanisation. Aureli studies the following examples: Andrea Palladio, Giovanni Battista Piranesi, Étienne-Louis Boullée, and Oswald

Fig. 6.36.

81. Ibid., p. 27.

82. See Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 14–25.

83. Rossi, 'Architecture for Museums', p. 16.

84. Aldo Rossi, 'Preface to the Second Italian Edition' (1969), in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), 164–167 (p. 165).

85. See Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture Within and Against Capitalism* (New York: Princeton Architectural Press, 2013).

86. See Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge, Mass.: MIT Press, 2011).

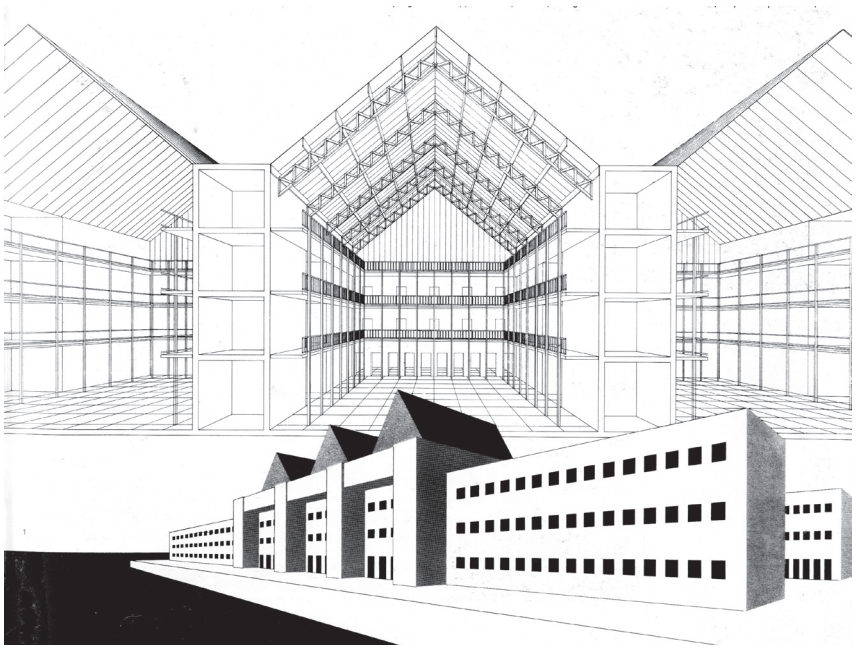
87. Aureli, *The Possibility of an Absolute Architecture*, p. ix.

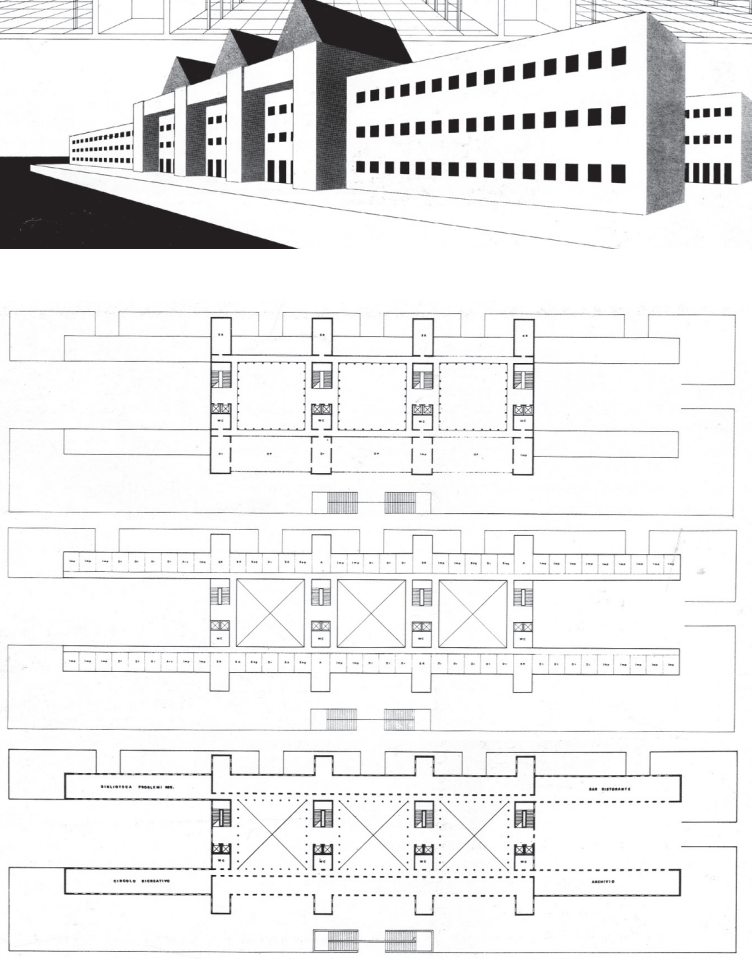
88. Ibid., p. 1.

89. The words are Arendt's in Aureli, *The Possibility of an Absolute Architecture*, p. 5.

90. Aureli, *The Possibility of an Absolute Architecture*, p. 4.

91. Aldo Rossi, 'Introduction to the Portuguese Edition of The Architecture of the City (1971)', in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), 169–177 (p. 171).





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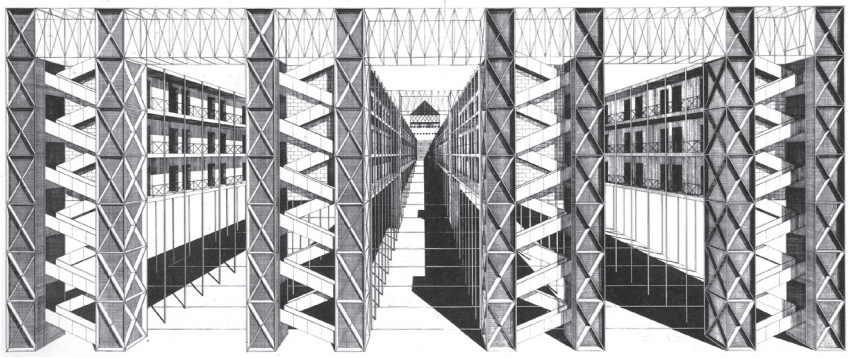

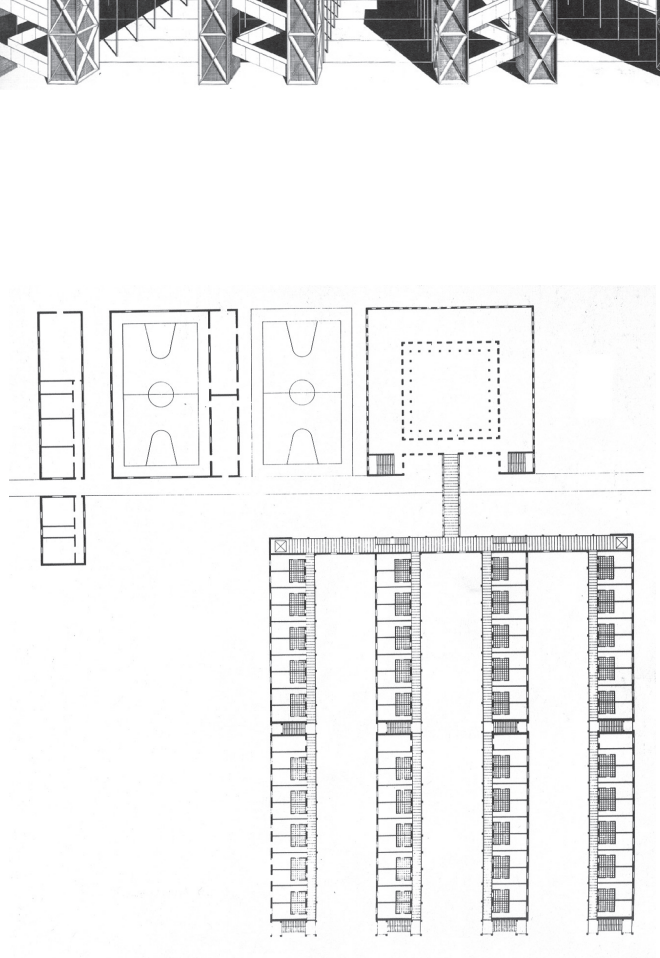

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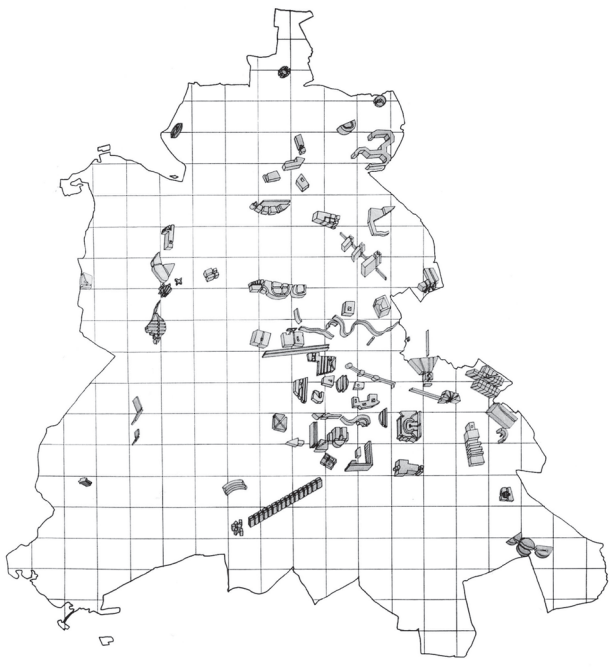


6.36.

6.34. Rossi, City Hall, Trieste, 1974. The formal opposition of central court and extending gallery are duplicated and condensed within a single building.
6.35. Rossi, Student Hostel, Trieste, 1974. Student centre and student rooms are separated and formally distinct. The former in a square plan block, the latter in extending wings.
6.36. Ungers, Koolhaas, Kollhoff, Ovaska, and Riemann, The City within the City: Berlin as a Green Archipelago, 1977. Urban "islands" intensify strategic points within the city, while the "sea" becomes a space for agricultural production and low density housing.

Mathias Ungers. In the chapter on Palladio, "The Geopolitics of the Ideal Villa: Andrea Palladio and the Project of an Anti-Ideal City," the network of villa's built by Palladio in the Veneto countryside in the Sixteenth-century represent an archipelago of urban palazzi, and not farmhouses as is commonly held. In the chapter on Piranesi, "*Instauratio Urbis*: Piranesi's *Campo Marzio* versus Nolli's *Nuova Pianta di Roma*," Aureli describes Piranesi's counter project to that of Nolli. In the chapter on Boullée, "Architecture as a State of Exception: Étienne-Louis Boullée's Project for a Metropolis," Boullée's singular monuments are presented as urban types that are representative in themselves of the urban types of Paris: *hôtel*, *place*, and boulevard. Finally, in the chapter on Ungers, "The City within the City: Oswald Mathias Ungers, OMA, and the Project of the City as Archipelago," Aureli describes the concept of "archipelago" as the framework in which his project for an "Absolute Architecture" has developed. In each of the chapters, Aureli describes the attributes of Absolute Architecture, the social and political context in which each architect worked, and the attitude of the architect in question. In doing so Aureli puts forward the necessity for understanding the absoluteness of architecture, its autonomy, the codes, techniques, specific examples, material condition, as well as the immaterial condition, the values, affects, and ethos that are embodied in each work. Aureli thus puts forth an understanding of architectural form as always "political form."

Summary

We opened this chapter by noting that the category of autonomy in architecture has been discussed by prominent commentators in recent years. Martin for instance has suggested that autonomy itself should be understood as a topological category, intrinsically multifaceted while Eisenman has said that autonomy needs to be rethought today.[92] We situated autonomy understood as an aesthetic, philosophical and political category. Then discussed formal autonomy as a notion linked to any given discipline's "internal" exploration and transformation of its specific language. As various commentators remind us architecture cannot be considered entirely autonomous because architecture is embedded in the sphere of power and economy so is determined by "external" pressures such as social relations and market forces. Yet to view architecture as autonomous is to propose a form of disciplinary critique between architecture and the various forces and relations that produce the city. Autonomy thus recognises on one hand architecture's "internal" formal condition, and on the other, the interactivity of architecture with forces and relations supposedly "external" to it.

On one hand architecture is a discipline with its own historically-determined body of knowledge. A discipline that can be self-critical, exploratory and transformative. Formal autonomy reminds us that architecture has its own specific language of formal and conceptual principles, visual conventions and values put forward in theories, drawings, built and unbuilt projects which provides architecture with a specific body of knowledge. On the other architecture is embedded in the sphere of power and can be considered as an index of culture. Architecture engages with capital, states, institutions, peoples, and is a determining force in the construction of social, political and cultural relations.

In the first instance autonomy proposes a typological critique of the history of architecture and its formation as the city. This was an examination of typological-form in order to understand the processes, principles and formal operations that underline the production of form. In particular, the relationship between the form of the individual building as it relates to the wider collective realm of the city, the production, reproduction, and transformation of forms, theories, and spatial or strategic conventions that are part of the shared history of architecture. In the second instance autonomy proposes a critique of the forces of production. However, we need to remember that there is no such thing as buildings that "oppose" the political tendency because those buildings that are realised are always those of the dominant class.[93] Hence, this form of critique proposes an ideological critique of the history of architecture, as with Tafuri. An examination of all the contributing factors around architectural form, such as the social, cultural, economic and political, in order to understand how architecture is produced through power.

It is important to say that both attitudes are independent of one another, but share a commitment to the repositioning of the singularity of architecture to the commonality of the city. Whether as understanding the form and role of architecture within the city as a product of social, cultural, economic and political concern. Or understanding architecture as much a product of the historical, urban and typological structure of the city itself. Again, both positions prioritise the collective mind over the individual. There is a problematic overlap in these positions because architecture supports social, cultural, economic and political aspects and is their concrete manifestation. Thus, architectural form cannot be considered as a single, isolated and private event because architecture is embedded within the material and immaterial reality; of power and economy.

To end the chapter, we can recall the political category of *agonism* as posited by Chantal Mouffe.[94] For Mouffe, the agonist principle develops from the idea of the political as a space of permanent conflict and antagonism, and hence a constancy of the we/they opposition. In antagonism there is no shared ground in the we/they opposition, so opponents are enemies, following Schmitt's notion of friend/enemy. In agonism, there is recognition of the legitimacy of the opponent, so enemy becomes adversary, which emphasises the potential benefit of conflict. If we say that both the autonomy of architecture and the autonomy of productive forces are equivalent, then we can hold that the agonistic principle is a useful way to understand the category of autonomy because agonism recognises both sides of the apparent opposition. Let us remember the quotation that opened this chapter: "If on one hand language allows man to 'enter into history,' on the other hand it remains a 'filter' that cannot let through the lived world of each human being."[95] When autonomy is considered as a way of understanding the language of architecture, its form and history, autonomy is still a filter that necessitates the interactivity with the human condition and the life of the city. Hence formal autonomy should be understood as relational, as contingent with history, about which we will say more in our conclusion.

92. Martin, *Utopia's Ghost*, p. 50. Martin suggests, it is more productive to understand autonomy as a topological category.

93. See Rossi, *The Architecture of the City*, p. 113.

94. See Chantal Mouffe, *Agonistics: Thinking the World Politically* (London: Verso, 2013).

95. Christian Marazzi, *Capital and Affects: The Politics of the Language Economy*, trans. by Giuseppina Mecchia (Los Angeles, CA: Semiotext(e), 2011), p. 38. First published in Italy in 1994.

7.
ANALOGICAL CITY
THE PRODUCTIVE CAPACITY OF DESTRUCTION AND THE ANALOGICAL CITY

My wing is ready for flight,
I would like to turn back.
If I stayed timeless time,
I would have little luck.

Gerhard Scholem, *Gruss vom Angelus.*[1]

Against the drastic alternative "A or B," which excludes the third, analogy imposes its tertium datur, its stubborn "neither A nor B."

Giorgio Agamben, *What is a Paradigm?* 2008.[2]

Rossi's concept of the analogical city developed over a number of years and although not in parallel with, in close relation to his theory of type. Rossi's thinking on type developed between the 1950s and 1960s and, as we have said, in numerous essays, lectures, and competition projects eventually synthesised in *The Architecture of the City*. The analogical city, by contrast, developed from theses set out in *The Architecture of the City*, which is to say mainly the theses concerned with type, monument, and collective memory, and at the same time through building projects, and drawings thereafter. We know that at one point, Rossi had the view to write a book entitled *La Città Analoga, Essai Sull'architettura* ("*Analogical City, Essay on Architecture*"). A book that Rossi was preparing in 1970 and we can speculate would theorise the concept of the analogical city in the same way that Rossi's theory of the city as an artefact was theorised in *The Architecture of the City.* However, the *Analogical City* book was not written and instead we have Rossi's "blue notebooks," and *A Scientific Autobiography* as partial documentation.[3]

Fig. 7.1.

In order to understand the analogical city, we need to refer to the different ways in which Rossi put forward the concept. For instance, in the short essay "Architecture of Reason as Architecture of Tendency", and the Preface to the 1969 Edition of *The Architecture of the City* in which Rossi presents a painting by Canaletto of the Rialto Bridge in Venice, mixed with projects by Palladio, described later as an, "analogical representation."[4] Concurrently the *Rational Architecture* exhibition of 1973, Rossi displayed a painting by Arduino Cantàfora entitled *The Analogical City*, which depicts among other buildings: Peter Behrens's AEG factory in Berlin, Alessandro Antonelli's "Mole" in Turin, Adolf Loos's building on Michaelerplatz in Vienna, the Pantheon in Rome, Ludwig Hilberseimer's design for Friedrichstrasse in Berlin, a conical tower by Boullée, industrial facilities, a Roman aqueduct, Rossi's own Gallaratese as part of the street edge, and at the centre in the foreground, Rossi's monument to the partisans in Segrate. In 1976, Rossi with a number of collaborators conceived the *Analogical City* collage for the Venice Biennale, after Rossi had published the essay entitled "An Analogical Architecture," in which he refers to a statement by Carl Jung to Sigmund Freud on analogical thinking and the unconscious.[5] When *A Scientific Autobiography* is published in 1981, we find Rossi refers to René Daumal's novel *Mount Analogue* and Gilbert Ryle's book *The Concept of Mind* in developing his thinking on analogy.[6]

Fig. 7.16.
Fig. 7.17.

In studies on Rossi, either intentionally partial, or more complete, it is not difficult to find discussion on the above by different commentators. Recent examples include a short excursus on Rossi and Ryle by Simon Richards in *Architect Knows Best*.[7] A detailed analysis of the *Analogical City* collage by Jean-Pierre Chupin in *Analogie et Théorie en architecture* in which Rossi and Daumal are also discussed.[8] On the collage panel itself, David Grahame Shane in *Recombinant Urbanism* has written the following:

> *Analogical City* itself does not observe simple codes of functional segregation, but jumbles up historical and modern examples and typologies, disobeying the modern logic of flows; it combines partially similar elements, stressing their shared urbanity to amplify the complexity of the city, harking back to the crowded, compressed forms of the European street-based city. It keeps the street and surrounds public monuments with built fabric, mixing and matching elements with no apparent (linear) logic.[9]

Shane calls the collage panel a "decoupage," borrowing a term from film that implies, as Shane writes, "that a narrative is being constructed by fragments."[10] We have already noted Hays' chapter in his book *Architecture's Desire* that discusses Rossi in relation to the idea of type and the unconscious of the city. Before Hays, Eisenman linked the "unconscious logic" inherent to Rossi's drawings in the essay "The House of the Dead as the City of Survival" which quotes Jung and Freud.[11]

Fig. 7.2.
Fig. 7.3.

While most commentators have started a discussion on Rossi's concept of the analogical city with Rossi's description of the painting by Canaletto, it is possible to start elsewhere. In Rossi's introduction to Boullée's *Essai*, as we have briefly mentioned, Rossi cited Baudelaire's notion of "*correspondances*," as an "analogical approach."[12] This aspect of Rossi's thinking on analogy in the development of his concept of the analogical city has received little attention.[13]

The purpose of this chapter is to put forward Baudelaire's notion of *correspondances*, as a conceptual category for understanding Rossi's preliminary thinking on the analogical city.[14] To do this we will turn to a number of thinkers who have discussed Baudelaire's notion, including Eliot, Foucault, Tafuri, Cacciari, and Benjamin. It is worth considering the relationship between Rossi and Benjamin a little more because through Benjamin we gain further insight on Rossi's notion of collective memory and its relation to the analogical city. We will then extend our understanding by making a link between Rossi's concept of the analogical city and Benjamin's *dialectical-image.* We will analyse Rossi's collage panel *Analogical City* and discuss his Modena Cemetery project. First, however, let us situate Rossi's concept of the analogical city by considering the evolution of his thinking on analogy.

Rossi's Analogical Framework

In 1964 Rossi visited Parma to take part in the competition for the reconstruction of the Paganini Theatre and visited the Palazzo della Pilotta (1583) which houses the Galleria Nazionale. It displays the following two *vedute* by Canaletto: *La Basilica di Vicenza e il Ponte dia Rialto* beside the, *Riconstruzione di Castel Sant'Angelo*.

Vedute, or "view-painting" was an eighteenth-century painting genre in which the artist depicted a city or town showing attractive streets, monumental buildings, animated city life, city festivals, and civic events, with the purpose of producing marketable work for tourists, patrons, collectors, and art dealers. The painting genre is such that paintings sometimes depict a factual and documentary view of the city, and at other times, paintings depict an imaginary view of the city but use recognisable landmarks. The former are often called *vedute essatte*, while the latter are called *vedute di fantasia*, or *capriccio.* Although Canaletto depicted the piazze and basilica of Venice, the regattas, carnivals, and serene waters, it is interesting that he also depicted the urban typicality, the out of the way corners, quiet backwaters, and workers quarters, removed from the attractions of tourists. Canaletto's paintings depict both the typical and the unique scenes of everyday life, and record civic events.

Depicting urban life was relatively new subject matter for artists during the early Enlightenment, however there were precedents. Vittore Carpaccio, for instance, during the Renaissance, and concurrent to Canaletto was Piranesi whom was drawing historic buildings in Rome. Canaletto's paintings are

Fig. 7.4.
Fig. 7.5.

1. Quoted in Walter Benjamin, 'Theses on the Philosophy of History' (1940), in *Illuminations*, ed. by Hannah Arendt, trans. by Harry Zohn (London: Fontana Press, 1992), 245–255 (p. 249). *Illuminations* translated from the German *Schriften*, 1955.

2. Giorgio Agamben, 'What is a Paradigm?' in *The Signature of All Things: On Method* (New York: Zone Books, 2008), pp. 19-20.

3. See Aldo Rossi, *Aldo Rossi: Quaderni Azzurri*, ed. by Francesco Dal Co (Milano; Los Angeles: Electa; Getty Research Institute, 1999).

4. See Aldo Rossi, 'An Analogical Architecture', *A+U: Architecture and Urbanism*, trans. by David Stewart, 65 (1976), 74–76.

5. See Rossi, 'An Analogical Architecture', p. 74.

6. See Gilbert Ryle, *The Concept of Mind* (London: Penguin, 1990). First published in 1949. Also see René Daumal, *Mount Analogue: A Tale of Non-Euclidian and Symbolically Authentic Mountaineering Adventures*, trans. by Carol Cosman (Woodstock, New York: The Overlook Press, 2004). First published after Daumal's death in 1952.

7. See Simon Richards, *Architect Knows Best: Environmental Determinism in Architecture Culture from 1956 to the Present* (Farnham: Ashgate, 2012).

8. See Jean-Pierre Chupin, *Analogie et théorie en architecture: De la ville, de la ville et la conception, même* (Gollion: Infolio, 2010). Not yet translated from French, Chupin delineates three periods in Rossi's evolving definition of analogy, with three main protagonists: Canaletto, 1960; Jung, 1970; and Daumal, 1980.

9. David Grahame Shane, *Recombinant Urbanism: Conceptual Modeling in Architecture, Urban Design and City Theory* (Chichester: Wiley-Academy, 2007), pp. 141-142. First published in 2005.

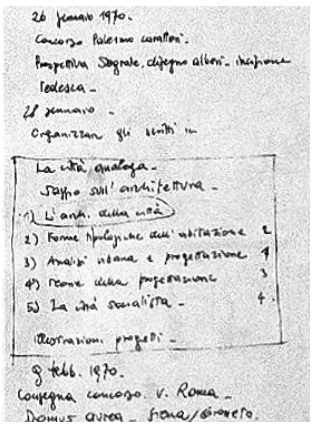
10. Shane, *Recombinant Urbanism*, pp. 140-142.

11. See Peter Eisenman, 'The House of the Dead as the City of Survival', in *Aldo Rossi in America: 1976-1979* (IAUS New York: MIT Press, 1979), pp. 4–15.

12. Aldo Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49 (p. 41).

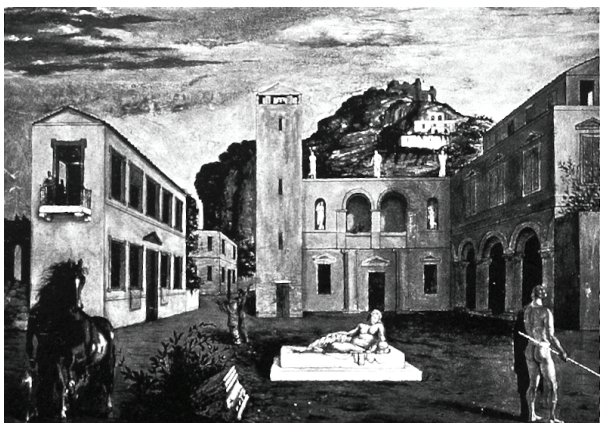
13. There is a brief reference to Baudelaire and the "correspondances" in Eugene J. Johnson, 'What Remains of Man: Aldo Rossi's Modena Cemetery', *Journal of the Society of Architectural Historians*, 41 (1982), 38–54.

14. Henceforth cited in the English "correspondence" unless within a quotation.



The Analogical City.
Essay on architecture
1) The architecture of the city
2) Typological forms of housing 2
3) Urban analysis and project 1
4) Theory of the project 3
5) The socialist city 4.
Project illustrations.

7.1.



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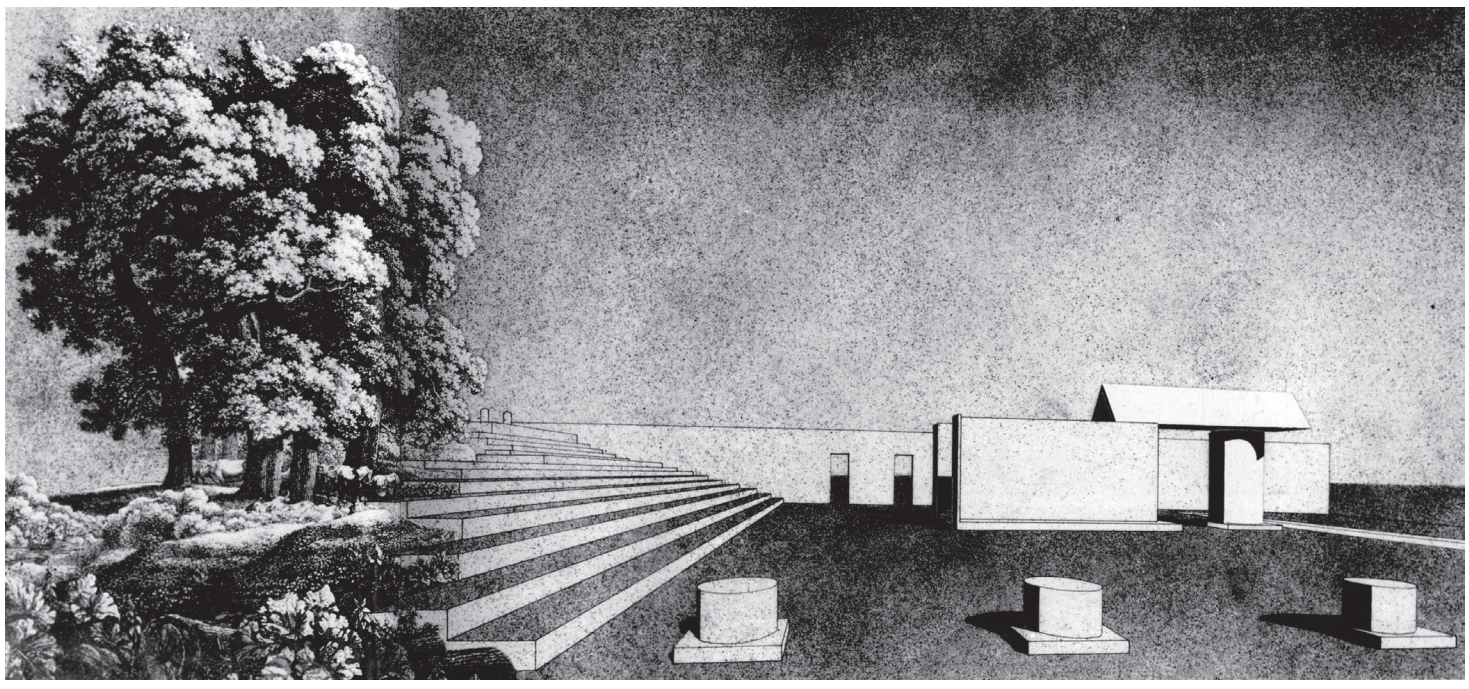


7.3.

7.4.

7.5.

7.1. Rossi, Provisional Table of Contents for the Analogical City book, from Blue Notebooks, January 1970. It is interesting that Rossi includes a section called "Project Illustrations" and if this indicates an intention to include his own projects in the book, then it suggests a closer linkage between the theory of the analogical city and its actuality. This is by contrast to The Architecture of the City which did not include Rossi's own projects.
7.2. Giorgio de Chirico, Piazza d'Italia, 1921. Ancient city and the Modern.
7.3. Rossi, Perspective of Segrate Piazza, 1965. The primitive hut is both walled and columned, and roofed with an extruded pediment.
7.4. Giovanni Battista Piranesi, View of Bridge at Castello Sant'Angelo, Rome, 1748. Castello to the right.
7.5. Giovanni Antonio Canaletto, Capriccio with Reconstruction of Castel Sant'Angelo, 1748. Canaletto's view of Castel Sant'Angelo (on the left) and an imaginary Rialto Bridge in Venice.

Fig. 7.6.
Fig. 7.7.
Fig. 7.12.

based on drawn studies prepared on site, and often concentrate on individual buildings, and groups of buildings, and not entire scenes. So Canaletto isolates specific buildings as singular examples. De-montaged from the urban scene, the examples become the material for re-montage.

There are broadly two kinds of study. One an intentionally loose drawing, and another more detailed drawing. Both made with pen and ink. Using these preparatory drawings Canaletto composes the individual studies as fragments of the city onto a canvas, building the painting with further studies but from different viewpoints, then combining them into a larger scene. He has to rectify the different viewpoints, reworking the perspective, altering and modifying the scene to construct the composition. Canaletto's paintings mix the varied elements of urban life played out within invented compositions which pull different parts of Venice together along with ancient Rome, and the surrounding Veneto. He draws together known architectural works from different sources and places them within a real site but in new arrangements. Canaletto's paintings are the result of documenting the everyday, the typical reality of the city, combining the common scenes of street life into new and unfamiliar compositions.

Fig. 7.8.

In 1969, Rossi used Canaletto's painting *La Basilica di Vicenza e il Ponte dia Rialto* to illustrate his concept of the analogical city as a "compositional procedure."[15] Rossi writes that existing buildings in the urban reality are the starting point of invention when integrated within an "analogous system."[16] In the Preface to the Second Italian Edition of *The Architecture of the City*, Rossi wrote the following:

> To illustrate this concept I gave the example of Canaletto's fantasy view of Venice, a *capriccio* in which Palladio's project for the Ponte di Rialto, the Basilica of Vicenza, and the Palazzo Chiericati are set next to each other and described as if the painter was rendering an urban scene he had actually observed. These three Palladian monuments, none of which are actually in Venice (one is a project; the other two are in Vicenza), nevertheless constitute an *analogous* Venice formed of specific elements associated with the history of both architecture and the city. The geographical transposition of the monuments within the painting constitutes a city that we recognise, even though it is a place of purely architectural references.[17]

Fig. 7.9.
Fig. 7.10.
Fig. 7.11.

In the painting, the buildings by Andrea Palladio exist as either built in the case of the basilica and palazzo, and as unbuilt in the case of the bridge. In the words of Rossi, they are "pre-established and formally defined."[18] For Rossi, significance is found in the operation by Canaletto to use existing built and unbuilt examples then composing them within an entirely new scene to produce an, "authentic, unforeseen, and original meaning of the work."[19] The result is, as Rossi has written, a "collage of Palladian architecture."[20]

The same can be said of the *Analogical City* painting by Arduino Cantàfora for the *Rational Architecture* exhibition at the 1973 Milan Triennale. As we have said, it composed a number of works by Rossi and others within a wide single point perspective. We can be reminded of Piero della Francesca's *Città Ideale*. After the Triennale, Rossi collaborated with Eraldo Consolascio, Bruno Reichlin, and Fabio Reinhart on the theoretical project entitled *Analogical City*, a collage panel for the 1976 Venice Biennale. It composed projects by Rossi and his references within a square frame, connoting a centralised plan. We will say more of this later.

Concurrently, in a monographic issue of *Architecture and Urbanism* in 1976, called *Conception and Reality*, Rossi wrote the short essay "An Analogical Architecture."[21] He recalls the Canaletto painting once more, in which Palladio's projects for the Rialto Bridge, the Basilica, and the Palazzo Chiericati are arranged as if Canaletto had reproduced an actual cityscape: "The geographical transposition of the two existing monuments to the site of the intended bridge forms a city recognisably constructed as a locus of purely architectonic values."[22] In the first instance, we can be reminded of the autonomy argument so that the value of the analogical city is its "purely architectonic" character. In a second instance, Rossi cites a letter to Sigmund Freud from Carl Jung on analogical thinking and the unconscious.[23] The latter writing, and this is via Rossi:

> I have explained that 'logical thought' is what is expressed in words directed to the outside world in the form of discourse. 'Analogical' thought is sensed yet unreal, imagined yet silent; it is not a discourse but rather a meditation on themes of the past, an interior monologue. Logical thought is 'thinking in words.' Analogical thought is archaic, unexpressed, and practically inexpressible in words.[24]

According to Rossi, these words offered a different sense of history. A history not only of material facts, but of the unreal and imagined, the archaic and unexpressed, "of affective objects to be used by the memory or in a design."[25] Rossi returns to the Canaletto painting and explains his interest in the removal in space of the various works of architecture by Palladio into a new scene described as an "analogical representation."

We can briefly situate Jung's words. Upon reading the original letter of Jung to Freud, we find that Jung's words contain the additional opposition of verbal and pictorial, and Jung connects analogical thinking with fantasy, emotion, and the unconscious:

> ...'logical' thinking is thinking in words, which like discourse is directed outwards. 'Analogical' or fantasy thinking is emotionally toned, pictorial and wordless, not discourse but an inner-directed rumination on materials belonging to the past. Logical thinking is 'verbal thinking.' Analogical thinking is archaic, unconscious, not put into words and hardly formulable in words.[26]

In January 1910, Jung undertook a series of lectures on the subject of mental disturbances in childhood, one of which was on symbolism. According to Jung, his ideas about symbolism were in "striking agreement" to Freud's preliminary ideas for the unconscious. The discussion took place over two months between 30th January 1910 to 30th March 1910, when Jung was writing a paper titled "Symbolism" and Freud sends Jung a draft of his paper "The Two Principles of Mental Action and Education." It later became the 1911 "Formulations on the Two Principles of Mental Functioning," in which Freud articulates "Primary and Secondary Processes."[27] Primary processes relate to the unconscious, which is influenced by heredity, it is ancestral and thus, archaic.[28] Secondary processes relate to the system of preconscious-conscious, which is determined by our individual experience and by other people, such as a particular social milieu, and

15. See Aldo Rossi, 'Preface to the Second Italian Edition' (1969), in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), 164–167.

16. Rossi, 'Preface to the Second Italian Edition' (1969), in *The Architecture of the City*, p. 166.

17. Ibid., p. 166.

18. Ibid., p. 166.

19. Ibid., p. 166.

20. See 'Architecture of Reason as Architecture of Tendency.' Refer Aldo Rossi, *Scritti scelti sull'architettura e la città 1956-1972* (Milan: Abitare, 2012), p. 346-348. The painting is also used in the 'Excursus' section of Colin Rowe and Fred Koetter, *Collage City* (Cambridge, Mass.: MIT Press, 1983), pp. 178-181.

21. Aldo Rossi, Vittorio Savi and David Stewart, 'Conception and Reality', *A+U: Architecture and Urbanism*, 65 (1976), 55–120.

22. See Aldo Rossi, 'An Analogical Architecture', *A+U: Architecture and Urbanism*, trans. by David Stewart, 65 (1976), 74–76 (p. 74).

23. The relationship between Rossi and Freud is both interesting and problematic. There are many statements by Rossi in *A Scientific Autobiography* that invoke Freud's key interests eros and death. For instance, Rossi writes of life and death, love and loss, childhood and maturity, beginning and end, construction and destruction. See in particular the following pages: 20, 43, 49, 53, 78, 82. For literature that links Rossi and Freud, the following is a selection: Peter Eisenman, 'The House of the Dead as the City of Survival', in *Aldo Rossi in America: 1976-1979* (IAUS New York: MIT Press, 1979), pp. 4–15; Peter Eisenman, 'The Houses of Memory: The Texts of Analogy', in *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), pp. 2–11; Jean La Marche, *The Familiar and the Unfamiliar in Twentieth-Century Architecture* (Chicago: University of Illinois Press, 2003); Mary Louise Lobsinger, 'That Obscure Object of Desire: Autobiography and Repetition in the Work of Aldo Rossi', *Grey Room*, 8 (2002), 38–61; Sébastien Marot, *Sub-urbanism and the Art of Memory* (London: Architectural Association, 2003); Vincent Scully, 'Postscript: Ideology in Form', in *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981), pp. 111–116; Cary Siress, 'City of Id: Modernism Couched', *TransScape*, 11 (2003), 146–153; Colin St. John Wilson, 'Sacred Games', in *Architectural Reflections: Studies in the Philosophy and Practice of Architecture* (Manchester: Manchester University Press, 2000), pp. 190–197. Also refer K. Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010); and Vincent Scully, 'Frank Lloyd Wright and the Stuff of Dreams', *Perspecta*, 16 (1980), 8–31.

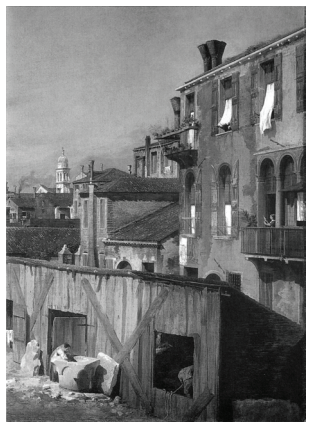
24. Jung via Rossi in 'An Analogical Architecture', p. 74.

25. Ibid., p. 74.

26. See Jung, C. G. (1910) "Letter 181 J" in Sigmund Freud and Carl Gustav Jung, *The Freud/Jung Letters: The Correspondence Between Sigmund Freud and Carl Jung*, trans. by R. F. C. Hull and Ralph Manheim (London: Hogarth Press, 1974), pp. 298-300. Refer also: 175 J, pp. 288-290; 199 F, pp. 330-332; and 246 F, pp. 410-412. Chupin has noted the recurrence of the statement by Jung on analogical thinking by many commentators on Rossi at the time. He explains five semantic distortions beginning with the Freud/Jung letters edited and translated into English by William McGuire in 1974. Chupin also brings attention to Rossi's note on the statement in his "Blue Notebooks" dating from 1975, written in Italian. Chupin also refers to a version of Rossi's *Analogical Architecture* article translated to Spanish in 1975, the 1976 English translation by David Stewart, and Eisenman's statement in his 1979 article for the *Aldo Rossi in America* exhibition catalogue. Vittorio Savi and Francesco Dal Co both used the Jung/Freud statement in essays at the time, and Hays has recently used the statement in *Architecture's Desire*. In each case there are slight distortions in the words. Eisenman for instance replaces "rumination" with "revolt," and Hays replaces "meditation" with "mediation."

27. Sigmund Freud, 'Formulations on the Two Principles of Mental Functioning' (1911), in *The Freud Reader*, ed. by Peter Gay (London: Vintage, 1995), pp. 301–306. First published in 1989.

28. Sigmund Freud, *An Outline of Psycho-Analysis*, trans. by James Strachey (London: Hogarth, 1949), p. 4.



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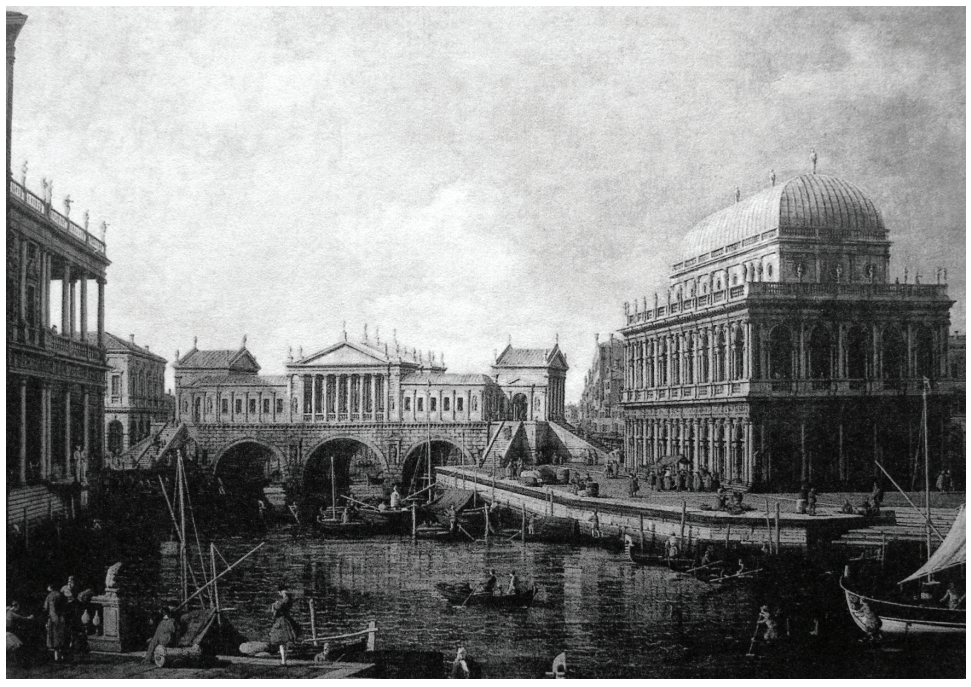

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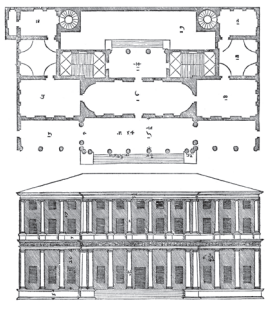

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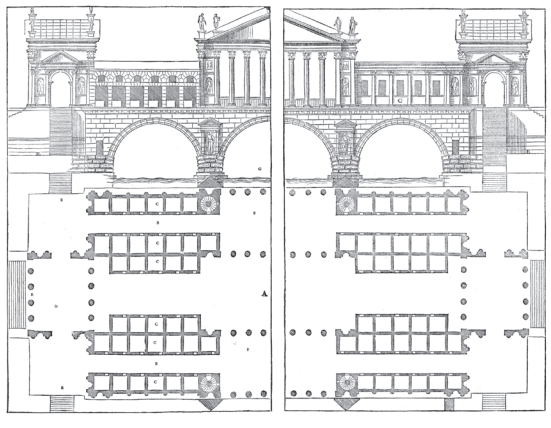

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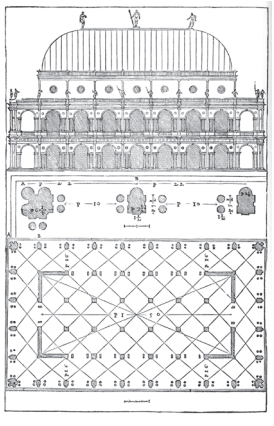

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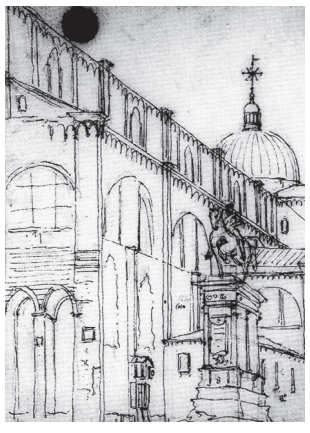

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7.6. Canaletto, Detail of The Stonemason's Yard, 1728. View of a quiet square, depicting the minor dramas of the everyday.
7.7. Canaletto, Detail of Rio dei Mendicanti, 1723. An early vedute of Canaletto that depicts Venetian people at work.
7.8. Canaletto, La Basilica di Vicenza e il Ponte dia Rialto, c1740. Canaletto replaces the actual bridge built by Antonio da Ponte, with an unbuilt bridge designed by Palladio from his Four Books. Either side of which, are two buildings again by Palladio, but transposed from Vicenza. As we view the painting, on the left is Palazzo Chiericati which replaces the Fondaco dei Tedeschi. On the right, the Basilica of Vicenza which replaces the Palazzo dei Camerlenghi in the market area. One city is built on top of another, Vicenza is superimposed on Venice.
7.9-7.11. Palladio, Spreads from the Four Books, 1570. The Palazzo Chierecati, Project for Rialto Bridge, and Vicenza Basilica.
7.12. Canaletto, Spreads from Canaletto's sketchbook, c1730. Separate studies from different viewpoints and of different parts of the building are later integrated within a single painting.

ones parents.[29] While material in the unconscious is inaccessible to our normal conscious state, it sometimes will surface, transformed, in errors of remembering and mistakes of speech, or we can gain access via the preconscious, in dreams for instance.[30] According to Freud, almost nothing is forgotten:

> The unconscious is quite timeless. The most important as well as the strangest characteristic of psychical fixation is that all impressions are preserved, not only in the same form in which they were first received, but also in all the forms which they have adopted in their further developments.[31]

This statement invites speculation on the notion of history and memory within the analogical city. The history of the city is the history of the formation and transformation of the city, its urban forms and architectural types. Types such as the courtyard of the individual house, the palazzo block, the boulevard, piazza, or larger urban formations such as the gridiron city plan. These are typical architectural forms that have developed since the beginning of civilisation. They repeat in form, endure through history, become transformed for different projects in different cities, by different architects, representing decisions, events, ideas, and defining the backdrop of our collective social experience. This contributes to the ethos of any given culture. We can understand the analogical city as the frame in which this ethos take form.

Let us turn now to *A Scientific Autobiography.* Towards the end of the book, Rossi writes that René Daumal's novel, *Mount Analogue* was important for his study of analogy. *Mount Analogue* is a surrealist novel that presents a strange adventure of a small group of friends who recognise the existence of an unknown mountain and embark on an expedition to reach it. The eight adventurers board the yacht *Impossible* to discover the invisible but "absolutely real" Mount Analogue. The narrator tells us that for a mountain to play the role of Mount Analogue, "*... its summit must be inaccessible, but its base accessible* to human beings as nature has made them. It must be *unique* and it must *exist geographically*. The gateway to the invisible must be visible."[32] We are told of the metaphorical connection between Earth and Sky. That the summit touches, "the sphere of the eternity," and the base, "the world of mortals." It is within such circularity of language that the novel unfolds and we find such oppositions as the following: the invisible and visible, symbolism and concrete reality, cause and effect, substance and chance, principle and consequence: "It is the path by which humanity can raise itself to the divine and the divine reveal itself to humanity."[33] Upon arrival at the base of Mount Analogue, the crew set up camp in a place that, "resembled a Mediterranean fishing village," a town called Port-des-Singes. A place where, "everything is already familiar," as the, "staggering swiftness of *déjà vu*."[34] If everything is familiar, then everything has already been seen. It is interesting to note a statement by Rossi in his introduction to a suite of drawings titled *Analogical City*, for an exhibition at the Institute for Architecture and Urban Studies in New York:

Fig. 7.13.
Fig. 7.14.
Fig. 7.15.

> Now it seems to me that everything has already been seen; when I design, I repeat, and in the observation of things there is also the observation of memory. I design my projects with a discrete sense of affection for each one but I reduce them to things that surround me: country houses, smoke stacks, monuments and objects, as if everything arose from and was confounded in time; in this beginnings and endings are confounded.[35]

In the time of the *Analogical City*, beginnings and endings are forgotten and everything has already been seen because everything is already existing. In this example, we can be reminded of the statement by Jung on the archaic and inexpressible, and of the statement by Freud above on the timelessness of the unconscious. As Rossi says, in his drawings elements repeat: country houses, smoke stacks, monuments and objects. In this way each drawing is in dialogue with the preceding and succeeding, and to architecture as a whole. The drawings, analogous to buildings and the city, are artefacts, produced over time and containing a trace of that time.

To take an example, the drawing titled, *Il tempo di una vicenda*, ("*The time of an event*") is divided vertically on the central axis, then into horizontal thirds, with the upper third divided unevenly in two. Objects, buildings and parts of buildings are distributed freely. From the upper left, we see a picture frame or mirror, a window and lamp, then a standing figure, and another lamp. Below is a table with coffee pot, and a building structure with a flag in front of a simplified bottle, which are both framed as in a picture. An inside and an outside are depicted so we can view outside, and see an airship, and two towers in the distance. We see formally reduced versions of buildings by Rossi, which increase in scale to the foreground: the Gallaratese housing, Segrate monument, the hollow cube from Modena cemetery, porticoes from Parma, and the project for a pavilion at Borgo Ticino. At the base of the drawing, Fagnano Olona school is repeated on the left and on the right, with low shadows cast from both directions. In *A Scientific Autobiography* Rossi said that he viewed this drawing and others that he made during this period as concentrated and synoptic views. "The frames of a possible film," as Rossi comments.[36] The image is thus a montage of architectural works, and objects, to be viewed as a backdrop for the habitual events that take place in everyday life.

Fig. 7.18.

We can now turn to the final thinker that Rossi cites in *A Scientific Autobiography* to situate his idea of analogy. Rossi connected Daumal's concept of analogy, the notion of familiarity and *déjà vu*, and the comment: "the astounding speed of the already seen," with Gilbert Ryle's definition of analogy as the end of a process.[37] In *A Scientific Autobiography* Rossi quotes the following statement by Ryle from the chapter "The Intellect" in Ryle's book *The Concept of Mind*:

> 'Contours are abstractions' or 'Contour lines are abstract map-symbols' is a proper and useful instruction for a map-referee to give to would-be readers and makers of maps. 'Contour lines are the outward expressions of the mapmakers' mental acts of conceiving heights (in feet) above sea-level' suggests that reading a map entails penetrating the impenetrable shadow-life of some anonymous surveyor.[38]

We can say that what Rossi finds important here is that the contour lines of the mapmaker are the material result of a complex and unknown process. There is a tension between the abstraction of the contour lines of the map, which delineate a precise location, and at the same time, are the result of a particular experience of some "anonymous surveyor." Rossi would have some affinity with the surveyor, because we find that he wrote at the beginning of *A Scientific Autobiography* of his own surveys of the city: "I read books on urban geography, topography, and history, like a general who wishes to know every possible battlefield - the high grounds, the passages, the woods. I walked the cities of Europe to understand their plans and classify them according to types."[39]

Developing a theory of the mind through behavioural analysis and description, Ryle analyses conceptual notions and human faculties such as: knowledge, will, emotion, imagination, and the intellect. The main proposition of the book is to refute Descartes position that each person is made up of body, which extends in space and time, and of mind, which does not exist in space. The body and its operations are public because the body is in space so can be scrutinized by external observers, while the mind, which is not in space is private.[40] In contrast, Ryle puts forward that the mind and body are not divided, but are in the same place, and active at the same time. His position is thus:

> I am arguing that in describing the workings of a person's mind we are not describing a second set of shadowy operations. We are describing certain phases of his one career; namely we are describing the ways in which parts of his conduct are managed. The sense in which we "explain" his actions is

29. Freud, *An Outline of Psycho-Analysis*, pp. 19-20.

30. See Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud: The Interpretation of Dreams (1900) First Part*, trans. by Anna Freud and James Strachey (London: Hogarth, 1953), Volume 4; Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud: The Interpretation of Dreams (1900-1901) Second Part, and On Dreams*, trans. by Anna Freud and James Strachey (London: Hogarth, 1953), Volume 5; Sigmund Freud, *On Dreams*, trans. by M. D. Eder (Mineola, New York: Dover Publications, 2001). First published in 1901. Freud tells us that dreams consist of memorable scenes, which are mainly made up of visual images. In a number of passages from *The Interpretation of Dreams*, Freud notes the visual and spatial aspects of dreams. For instance refer p. 33: "... visual images constitute the principal component of our dreams." In *On Dreams*, Freud writes about the dream and visual images, composite and mixed images, image fragments, visual scenes and the dream facade. For instance refer: pages 13, 15, and 23 of Eder's translation.

31. Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud: The Psychopathology of Everyday Life (1901)*, trans. by Anna Freud and James Strachey (London: Hogarth, 1960), Volume 6, p. 274. A footnote added in 1907.

32. Daumal, *Mount Analogue*, p. 32.

33. Ibid., p. 31.

34. Ibid., pp. 77-79.

35. Aldo Rossi, 'Introduction', in *Aldo Rossi in America: 1976-1979*, trans. by Diane Ghirardo (IAUS New York: MIT Press, 1979), 2–3 (p. 3).

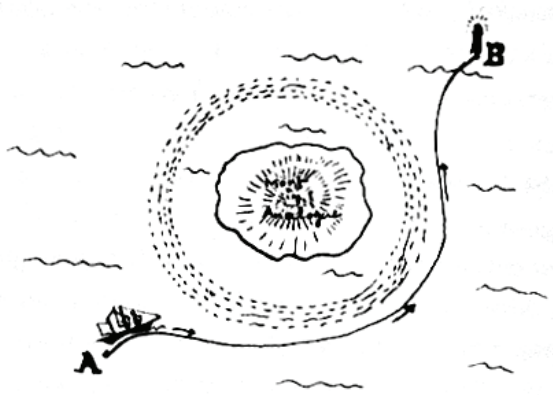
36. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), p. 72.

37. See Rossi, *A Scientific Autobiography*, pp. 81-82. For Chupin, *Mount Analogue* was a turning point in the "metaphysics" of Rossi's idea of analogy. See Jean-Pierre Chupin, *Analogie et théorie en architecture: De la ville, de la ville et la conception, même* (Gollion: Infolio, 2010), p. 171.

38. Rossi, *A Scientific Autobiography*, p. 71. See also Gilbert Ryle, *The Concept of Mind* (London: Penguin, 1990), p. 291.

39. Rossi, *A Scientific Autobiography*, p. 16.

40. Ryle, *The Concept of Mind*, pp. 13-17.



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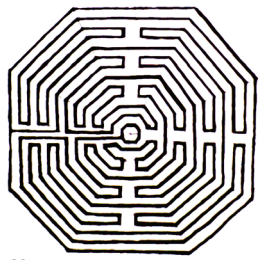

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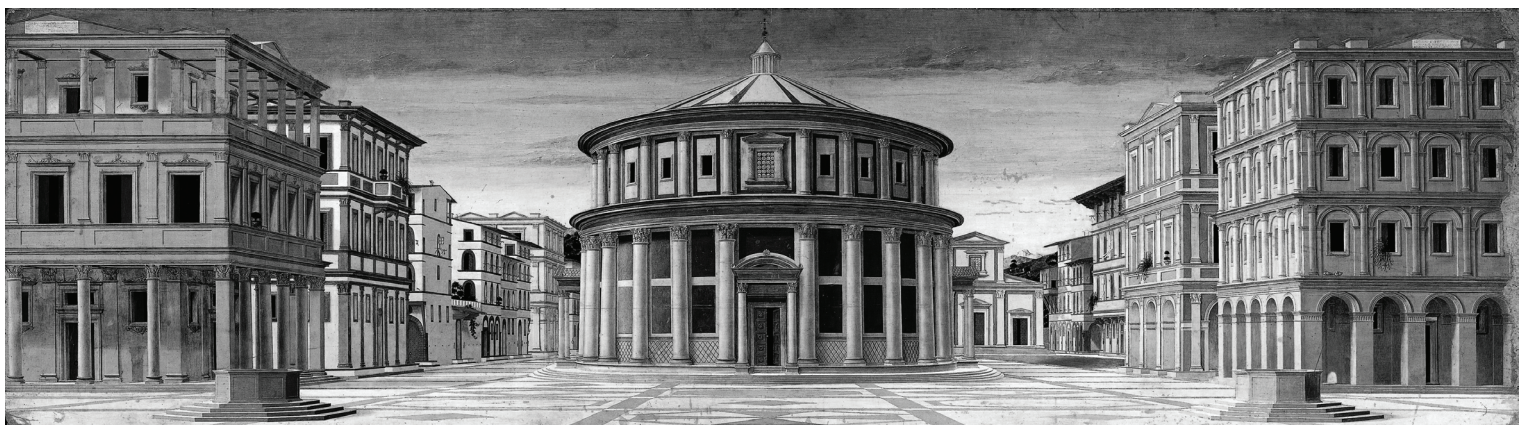

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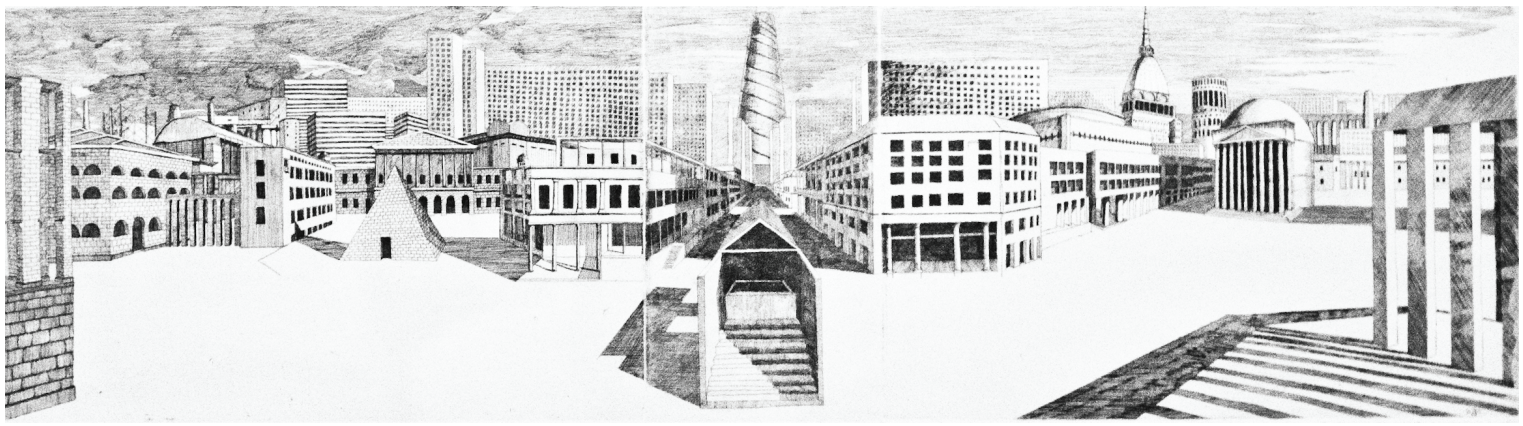

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7.18.

7.13. Daumal, Diagram of the ship Impossible as it circles around Mount Analogue unable to gain access, 1944.
7.14. Plan of Mausoleum of Hadrian, (c135 AD). Later transformed into the Catel Sant'Angelo.
7.15. Drawing of a labyrinth, known as the House of Daedalus.
7.16. Piero della Francesca, Città Ideale, 1470. We look toward the open door of the baptistry and the baptistry looks back.
7.17. Cantàfora, Analogical City, 1973. Perspective drawing made for the Tendenza Rational Architecture exhibition. Buildings by Rossi, Antonelli, Hilberseiemr and Roman ruins are juxtaposed within a vedute like that of Canaletto but composed in a single-point perspective like della Francesca's Città Ideale.
7.18. Il tempo di una vicenda, ("The time of an event"), 1978. Inside and outside overlap. A view of Rossi's study is also a view into the plane of Rossi's thinking. The same drawing, but with a slightly modified line and tone, is elsewhere entitled "Other Conversations."

> not that we infer to occult causes, but that we subsume under hypothetical and semi-hypothetical propositions.[41]

Ryle's book is full of descriptive commentary. He uses analogies to illustrate and work through concepts, and elaborates categories, then outlines further lower order keywords. It is worthwhile making one further note about Ryle, which, although not mentioned by Rossi, seems appropriate for us to put forward. It is a short discussion by Ryle on "tendency," and as we will remember from our discussion in previous chapters, Rossi was the so called leader of the Tendenza group of architects. Tendenza can be translated to English as "tendency." Ryle, calls tendency a motive word that can be contrasted with a skill word. While the former is related to knowledge, the latter is related to belief.[42] Ryle extends his discussion to the human capacity of habit. The notion of *habitual practice*, refers to the adherence of codes and conventions, to regularity, our tendency toward addictions, ambitions, loyalties. The typical elements of everyday reality, embedded within the formation of subjectivity. So the category of "tendency" connotes habit, as well as daily life.

We have now followed the acknowledged trajectory of Rossi's definition of analogy with his view of putting forward a design method based on analogy, an "analogical architecture." We outlined the following: from the 1969 analogical representation by Canaletto, the analogical city of the years 1973 to 1976, the analogical thinking of Jung, to the definition of analogy as *déjà vu* via Daumal's *Mount Analogue*, and Ryle's *Concept of Mind*. We can extend this trajectory of Rossi's study of analogy by referring to Baudelaires's notion of "*correspondances*."

Correspondances and the Dialectical-Image

In the last chapter, we discussed Rossi's translation and introduction to Boullée's *Essay on Architecture* and said that Rossi distinguished two kinds of rationalism. The first, *conventional rationalism*, which puts forward architecture as developed and transmitted by the autonomous language of architecture based on type, formal and programmatic distribution, and theoretical discourse. The second, *exalted rationalism*, which puts forward a rational architecture that builds on conventional rationalism but with an emotional nucleus that stands for the self-imposed logical principle of the architect – of authorship – carried through all projects. While the former derives architecture from the principles of architecture itself, the latter illuminates these principles but stands outside of a conventional system of reference. "Hence," as Rossi writes, "on the one hand, the system enjoys maximum autonomy, with clear intentions, while on the other hand there is the autobiographical singularity of experience."[43] In the essay, Rossi says he wants to encourage a "dynamic dialogue" between these two positions, using an "analogical approach" and creating what Charles Baudelaire called *correspondances*.[44] Although it appears that Rossi goes no further than this in describing the influence of Baudelaire, it is a productive way to gain further insight on Rossi's concept of analogy. These are the first lines of Baudelaire's sonnet entitled *Correspondances*:

> Nature is a temple whose living pillars
> Sometimes give forth a babel of words;
> Man wends his way through forests of symbols
> Which look at him with their familiar glances.
>
> As long-resounding echoes from afar
> Are mingling in a deep, dark unity,
> Vast as the night or as the orb of day,
> Perfumes, colours, and sounds commingle.[45]

For Rossi, Baudelaire was a literary figure, "whose critical intuitions about architecture and the city are amongst the most remarkable."[46] In *The Architecture of the City* Rossi quoted the following statement from Baudelaire: "The old Paris is no more; the form of a city changes more quickly, alas, than the heart of a mortal."[47] This is from *The Flowers of Evil*, in which Baudelaire writes about dreaming, passion, sex, of death, destruction, and martyrdom, of memory, of prostitutes, gamblers, criminals, to demons and serpents, in attics, inns, and studies. Ancient is mixed with modern, the shock of metropolitan life, common ritual, sordid experience, both real and imagined, all form Baudelaire's apparatus of imagery. They are images that describe his observations on the city in the middle of the nineteenth-century. For Eliot, Baudelaire elevates this imagery to, "the *first intensity* - presenting much more than itself."[48] Reading into this, Eliot suggests that Baudelaire has created an expression located in what is common in the city, the typical in life, and turned into something unique, like the exalted rationalism that Rossi put forward. Baudelaire observes the life of the city, which becomes the material of his poetry, just as Rossi observes the monuments and everyday objects of the city which becomes the material of his architecture.

In Foucault's discussion of Baudelaire, the character types of *flâneur* and *ascetic* are opposed in order to identify an *historico-critical attitude* in Baudelaire. While the flâneur is an idle, strolling spectator, the ascetic is a solitary and deliberate, "man of modernity."[49] The historico-critical attitude that Foucault finds in the ascetic is a necessary relationship with not only the present in relation to the past, but also the relationship that is established with oneself: "To be modern is not to accept oneself as one is in the flux of the passing moments; it is to take oneself as object of a complex and difficult elaboration."[50] Therefore, to value the present reality, but imagine it otherwise, and to transform the present, "by grasping it in what it is."[51] Foucault proposed that this attitude can bear on material practices and discourses of an epoch, putting it thus:

Fig. 7.19.
Fig. 7.20.
Fig. 7.21.

> I mean a mode of relating to contemporary reality; a voluntary choice made by certain people; in the end, a way of thinking and feeling; a way, too, of acting and behaving that at one and the same time marks a relation of belonging and presents itself as a task.[52]

These brief reflections by Eliot and Foucault have introduced us to Baudelaire's general position, which is to view modern experience as a tension between the common ritual of daily life, and of grasping the essence of the epoch to transform it into something more. To focus now on Baudelaire's concept of *correspondances*, we can turn to Benjamin who has written extensively on Baudelaire. In Benjamin's essay "Central Park" he writes the following:

> The crucial basis of Baudelaire's production is the tension between an extremely heightened sensitivity and an extremely intense contemplation. This tension is reflected theoretically in the doctrine of *correspondances* and in the principle of allegory. Baudelaire never made the slightest attempt to establish any sort of relations between these two forms of speculation, both of the greatest concern to him. His poetry springs from the interaction of the two tendencies, which are rooted in his temperament.[53]

Here, Benjamin places sensitivity and contemplation in opposition, but at the same time tells us that they are equivalent and related terms held in tension. It is the interaction of the two terms that give rise to the poetry of Baudelaire. As Benjamin describes it, Baudelaire turns to the city with an "allegorical gaze," and walks the streets and arcades, on the lookout for banal incidents and humble objects that become the material of his poetry and allegory, bringing an emotional nucleus to describe the general cultural condition. Baudelaire see's the coming alienation of the "big-city" dweller and transforms this into poetic allegory, personified in characters such as serpents, prostitutes, and gamesmen. It is the disconcerting quality that Baudelaire gives to habitual experience and typical objects that provides his poetics with a realness, "intensified."[54]

In the following passage, Baudelaire contrasts words and imagery. Eternal thought is mixed with the violent shock of temperament and reason as

41. Ibid., p. 49.

42. Ibid., pp. 121-130.

43. Aldo Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49 (p. 41). First published in 1967. See *Scritti scelti* pp. 321-338.

44. Rossi, 'Introduction to "Architecture, Essai Sur L'art"', p. 41.

45. Quoted in Walter Benjamin, *Illuminations*, ed. by Hannah Arendt, trans. by Harry Zohn (London: Fontana Press, 1992), p. 178. Translated from the German Schriften, 1955.

46. See Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), p. 184, Footnote 32.

47. Baudelaire via Rossi, *The Architecture of the City*, p. 61. Refer the verse "The Swan" in Charles Baudelaire, *The Flowers of Evil*, trans. by James McGowan (Oxford; New York: Oxford University Press, 2008). First published in 1857.

48. Thomas S. Eliot, 'Baudelaire' (1930), in *Selected Essays* (London: Faber, 1932), 381–392 (p. 388).

49. Michel Foucault, 'What Is Enlightenment?', in *The Essential Works of Michel Foucault, 1954-1984: Ethics, Subjectivity and Truth Vol. 1*, ed. by Paul Rabinow, trans. by Robert Hurley and et al. (New York: The New Press, 1997), 303–320 (p. 311). Translation of *Dits et ecrits*, 1954-1988.

50. Foucault, 'What Is Enlightenment?', p. 311.

51. Ibid., p. 311.

52. Ibid., p. 309.

53. Walter Benjamin, 'Central Park', in *The Writer of Modern Life: Essays on Charles Baudelaire*, ed. by Michael W. Jennings (Cambridge, Mass.: Belknap Press, 2006), 134–169 (p. 152).

54. Walter Benjamin, 'Paris, the Capital of the Nineteenth Century', in The Writer of Modern Life: Essays on Charles Baudelaire, ed. by Michael W. Jennings (Cambridge, Mass.: Belknap Press, 2006), 30–45 (p. 40).

7.19.

7.20.

7.21.

7.19. Haussmannien Urban Form, c1866. Plot subdivisions are disturbed and blocks are regularised which was concurrent with the rise of private property. Baudelaire was living through the period of Haussmann's Paris.
7.20. Artist unknown, La Sortie du numéro 113, 1815. A Gallery of the Palais-Royal.
7.21. Photographer unknown, Passage Jouffroy, 1845-1847. Frontispiece to Benjamin's The Arcades Project.
The arcade evolved as a nineteenth-century urban type through the rise of retail, the selling of luxury products, and the development of iron and glass as building materials. Benjamin viewed the arcade as a building that manifests the latent character of the era.

Baudelaire montages his "as found" material. The lines are from the central section of *Dusk*, and we are taken from outside to inside, from one room to the next, activity to activity and encountering a sequence of varied protagonists:

> Against the glimmerings teased by the breeze / Old Prostitution blazes in the streets; / She opens out her nest-of-ants retreat; / Everywhere she clears the secret routes, / A stealthy force preparing for a coup; / She moves within this city made of mud, / A worm who steals from man his daily food. / One hears the hissing kitchens close at hand, / The playhouse screech, the blaring of a band. / The tables at the inns where gamesmen sport / Are full of swindlers, sluts, and all their sort. / Robbers who show no pity to their prey / Get ready for their nightly work-a-day / Of cracking safes and deftly forcing doors, / To live a few days more and dress their whores.[55]

Benjamin quotes Proust in a discussion on the temporal element of Baudelaire's poetry. Benjamin recounts that Proust writes time is "chopped up" in Baudelaire.[56] Thus time is cut up as in a montage. Benjamin comments the following: "days of recollection, not marked by any experience. They are not connected with the other days, but stand out from time."[57] We can understand this as Baudelaire's correspondences: the oscillation between general and particular. On one hand it is possible to recollect a day in general, and that day was not marked by a particular event or experience. It was a typical day, habitual. On the other hand, that day stands out from other days. It was to some degree unique. Benjamin writes: "The important thing is that the *correspondances* record a concept of experience which includes ritual elements."[58] Benjamin links correspondence to the recording of ritual experience, or put another way, as the documentation of the everyday, typical aspects of reality. If we take these elements together, correspondence is the intensification of a general characteristic, extrapolated from a reading of the habitual aspects of daily life, transformed momentarily into something particular.

Let us return to Rossi and consider this discussion in relation to what he has said on "correspondance" in the years after Rossi's essay on Boullée. In *An Analogical Architecture* Rossi said the following:

> Today, I see my architecture within the context and limits of a wide range of associations, correspondences, and analogies. Whether in the purism of my first works or the present investigation of more complex resonances, I have always regarded the object, the product, the project as being endowed with its own individuality that is related to the theme of human and material evolution.[59]

In the first part of the statement, the concept of correspondence is related with analogy and association. In the second part, Rossi connects "the object, the product, the project" with first complex resonances, and second material evolution. We can infer that complex resonances refers to aspects of the human condition like thinking and feeling, acting and behaving, of affects and experience. While material evolution is for how these complex resonances are embedded within the architectural project as a material artefact, built over time and by human labour. We can remember Rossi's initial thesis for the city as an artefact when Rossi said that the city is the final constructed result of a complex operation.[60] He ended *The Architecture of the City* with the words:

Fig. 7.22.
Fig. 7.23.
Fig. 7.24.

> Thus the complex structure of the city emerges from a discourse whose terms of reference are still somewhat fragmentary. Perhaps the laws of the city are exactly like those that regulate the life and destiny of individual men. Every biography has its own interest, even though it is circumscribed by birth and death. Certainly the architecture of the city, the human thing par excellence, is the physical sign of this biography, beyond the meanings and the feelings with which we recognise it.[61]

Rossi writes that the laws of the city are like those that regulate the life of men, and in the above statement, these laws are birth and death. We should remember that for Rossi, the city is architecture and it is illuminating to recall a statement from *A Scientific Autobiography* at this point. In that book Rossi writes, "while I may talk about a school, a cemetery, a theatre, it is more correct to say that I talk about life, death, imagination."[62] The aspects of birth, of life, death, and imagination, are the "complex resonances" that Rossi noted above. On one hand, we could say that material evolution can be related to the artefact. On the other hand, it is notable that Rossi put forward a series of building types when discussing life, death, and imagination: the school, cemetery, and theatre. This suggests that the idea of type is linked with material evolution as counterpart of complex resonances. Yet, when Benjamin discusses the correspondences of Baudelaire, the distinction is not absolute. Instead, the concept of correspondence suspends and intensifies the relations.

This is close to what Benjamin has called the "dialectical-image." A concept that Benjamin uses to describe the desires of society, collective experience, the historical dynamic, as embedded in the formal and spatial condition of the city. An idea of the epoch and an expression of the collective will of a period, its past and present are momentarily illuminated by the dialectical-image. A montage of complex resonance, and material evolution, architectural form and the production of subjectivity.

The Destructive Character and Montage

It is possible to gain further insight into the work of Rossi through the thinking of Benjamin. Considering the acknowledged significance of Benjamin's thinking on architecture in general, we can ask why more work has not been undertaken on the relationship between Rossi's thinking and Benjamin's. Let us follow with some brief reflections on how Benjamin's thinking has informed other commentators in architecture.

It is difficult to classify Benjamin's intellectual work. As Arendt, has said in her introduction to the essays collected in *Illuminations*, Benjamin had translated Baudelaire, reviewed books by living and dead writers, and written an unfinished history of the French nineteenth-century; yet he was not a translator, literary critic, or historian. Benjamin "thought poetically," Arendt wrote, "but he was neither a poet nor a philosopher."[63] Central to Benjamin's concern was the emphasis on actual phenomena, the "wonder of appearance" as Arendt has said, but by contrast and in tension, there is also a quasi-spiritual element to Benjamin's thinking.[64]A concern for the world of things, in which word, idea, experience coincide with the metaphysical. By analysing the surface appearance of culture, its fashions, artworks, magazines, photography, and buildings, Benjamin aimed to identify the latent characteristics of society, its myths, rituals, memories and tendencies.

In architectural theory, Benjamin's concepts have been assimilated in different forms and to varying extents by commentators including: Tafuri, Dal Co, Cacciari, Hays, Teyssot, and others. We can note a selection here. As a point of departure in the chapter "Dwelling and the 'Places' of Modernity," in *Figures of Architecture and Thought*, Dal Co quotes Benjamin's essay "Experience and Poverty" to discuss industrial production intruding into the nineteenth-century interior.[65] In Benjamin's essay, two different kinds of experience are distinguished: *shock* and *lived experience.* The former refers to the ephemeral, disconnected moments and surface sensation, while the latter refers to our ability to establish a stock of life experience. Cacciari has said that the shock of experience is registered and ingrained in the memory to take on the character of lived experience.[66] He writes that anguish, hopelessness, and shock become a "cultural fact" manifest in the social relations of the city, which Benjamin theorises. As Cacciari writes, "This theory is born out of a collision with the crowd and assumes unto itself the fundamental experiences of the life of the Metropolis, positing them as *inescapable tragedy.*"[67] While Cacciari discusses the city, Dal Co writes of the interior. Quoting Benjamin, "We have become impoverished. We have given up one portion of the human heritage after another, and have often left it at the pawnbroker's for a hundredth of its true value, in exchange for the small change of 'the contemporary.'"[68] In Dal Co's discussion on dwelling and modernity, he finds that impoverishment is revealed in the interior, the "nostalgic microcosm" of the "bourgeois residence," with its accumulation of unnecessary commodities.

55. See "Dusk" in Baudelaire, *The Flowers of Evil*, p. 193.

56. Walter Benjamin, 'On Some Motifs in Baudelaire', in *Illuminations*, ed. by Hannah Arendt, trans. by Harry Zohn (London: Fontana Press, 1992), 152–197 (p. 177).

57. Benjamin, 'On Some Motifs in Baudelaire', p. 177.

58. Ibid., p. 177.

59. Aldo Rossi, 'An Analogical Architecture', *A+U: Architecture and Urbanism*, trans. by David Stewart, 65 (1976), 74–76 (p. 74).

60. See Rossi, *The Architecture of the City*, p. 22.

61. Ibid., p. 163.

62. See Rossi, *A Scientific Autobiography*, p. 34; and p. 78.

63. Hannah Arendt, 'Introduction: Walter Benjamin, 1892-1940', in *Illuminations* (London: Fontana Press, 1992), 7–58 (pp. 9-10).

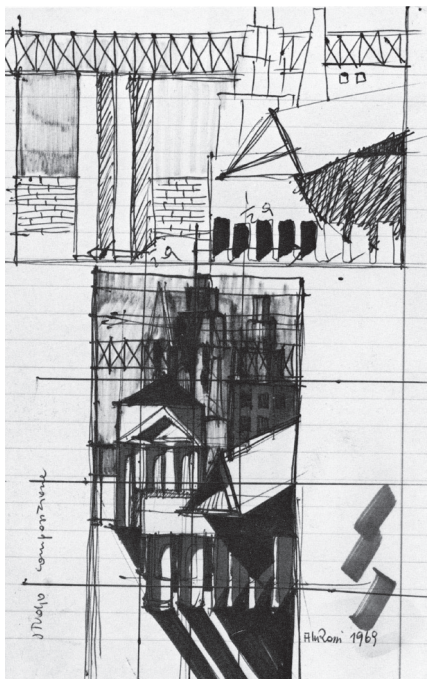
64. Arendt, 'Introduction: Walter Benjamin, 1892-1940', pp. 18.

65. Francesco Dal Co, *Figures of Architecture and Thought: German Architecture and Culture, 1880-1920*, trans. by Stephen Sartarelli (New York: Rizzoli, 1990), p. 13.

66. Massimo Cacciari, *Architecture and Nihilism: On the Philosophy of Modern Architecture*, trans. by Stephen Sartarelli (New Haven: Yale University Press, 1993), p. 16-17.

67. Cacciari, *Architecture and Nihilism*, p. 19.

68. Benjamin in Dal Co, *Figures of Architecture and Thought*, p. 13.



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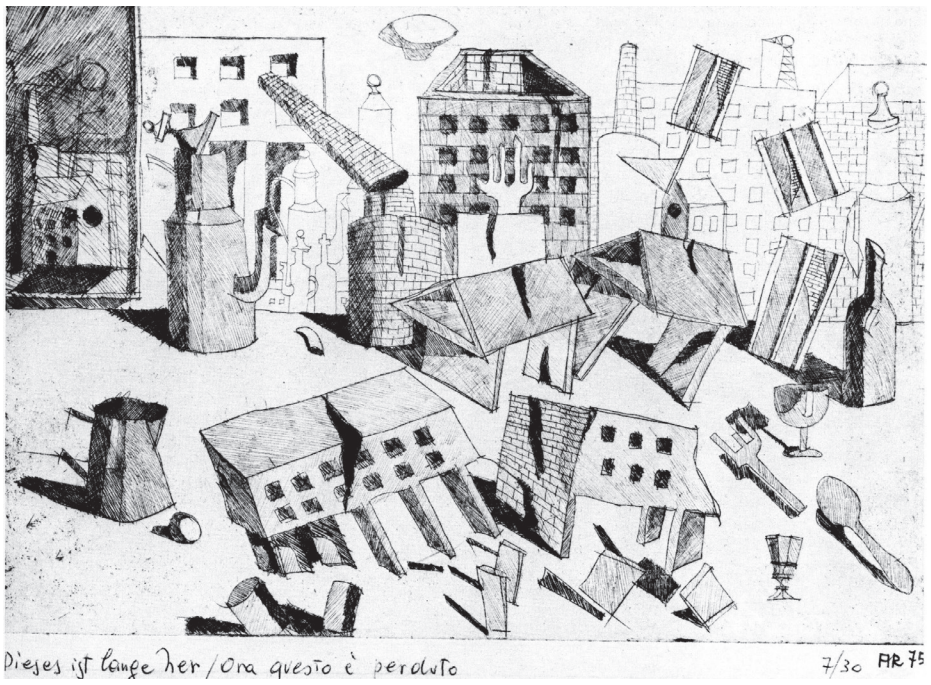

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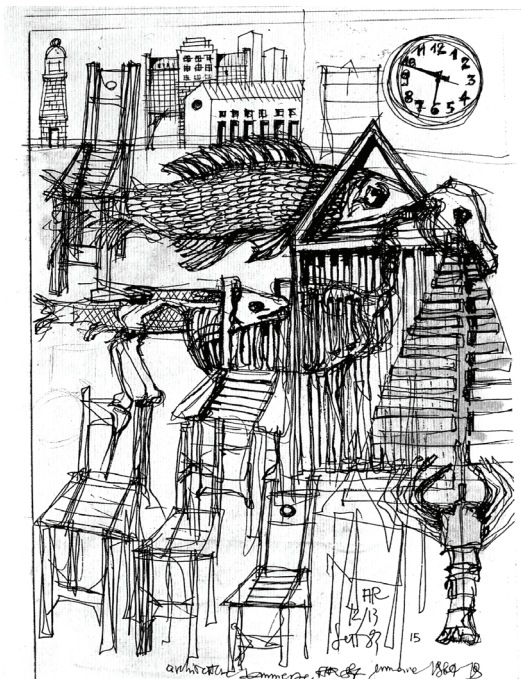


7.24.

7.22. Rossi, Composition study, 1969. Correspondence links a multiplicity of forms. The temple pediment is extruded to become a bridge. Solid piers contrast with framed bracing. Light and dark are exaggerated by Rossi's mark making.
7.23. Rossi, This was a long time ago, 1975. The destruction of the city, with a view to its eventual reconstruction. On one hand, the drawing reflects the chaos of the city. On the other, Rossi composes the drawing within a triangular figure articulated from the left with the buildings tilted to the centre and from the right with domestic objects diagonally placed. The empty cube – Rossi's project for Modena – forms the focus of the image.
7.24. Study from Rossi's series of drawings entitled "The Horse," 1983. The city is mixed with objects and figures. Skeletol structures of animals are mixed with Rossi's projects for Modena Cemetery, his Cabane and an urban background.

In *Architecture and Utopia*, Tafuri points to Benjamin's discussion of the decline of "aura" in the essay "The Work of Art in the Age of Mechanical Reproduction."[69] While there is a melancholic tone to Benjamin's thinking on the decline of aura which he extrapolates to a wider societal realm, for Tafuri, the end of aura is a deliberate choice that expresses, "the integration of the subjective moment with the complex mechanism of rationalisation, but at the same time the identification of an 'ethic of rationalisation' completely directed upon itself."[70] Tafuri returns to Benjamin's "Work of Art" essay later in *The Sphere and the Labyrinth* and quotes Adorno: "As Benjamin pointed out, the aura of art works is not only their here and now, but also their content insofar as it points beyond the work's givenness."[71] Here Benjamin is noted for working from the appearance, to the structural and latent relations that give rise to the work of art. An assessment that Adorno says is arts formerly "auratic 'cult value,'" now substituted in Modernity as the image of "the process of economic exchange."[72]

A similar subject/object relation was developed by Hays in *Modernism and the Posthumanist Subject* to discuss the work of Hilberseimer and Meyer.[73] Hays looked to Benjamin, along with other thinkers such as Adorno and Lukács, for a dialectical understanding of the "subject-object framework."[74] These commentators provide Hays with a framework to discuss subjectivity beyond the particular person, to social relations, and their differences, in relation to the artefacts of culture, their production, and "the forces by which those artefacts are produced, forces that are, in turn, manipulated by subjects."[75]

The interior is taken up by Georges Teyssot's recent book *A Topology of Everyday Constellations*.[76] "Reading Benjamin today," Teyssot writes, "is still to rethink the possibility of history as a constellation saturated with tensions."[77] Teyssot reminds us that Benjamin was influenced by surrealism and adopted, "the principle of montage into history."[78] Benjamin himself called his method "literary-montage." About which he wrote the following in the *Arcades Project*: "I needn't *say* anything. Merely show. I shall appropriate no ingenious formulation, purloin no valuables. But the rags, the refuse - these I will not describe but put on display."[79] In Benjamin's literary-montage, we not only read the words, but gaze at their formal configuration, how statements connect with one another, juxtaposing ideas as representations of an epoch. The *Arcades Project*, unfinished upon Benjamin's death in 1940, was to consist entirely of quotations, as a colossal piece of literary montage.[80] In Adorno's reflections on Benjamin's *Arcades Project* the following passage is notable: "Benjamin's intention was to eliminate all overt commentary and to have the meanings emerge solely through a shocking montage of the material. His aim was not merely for philosophy to catch up to surrealism, but for it to become surrealistic."[81]

Rossi too, considered the influence of surrealism in his work, singling out Raymond Roussel, Max Ernst, and Georges Bataille, as important.[82] Another visual influence he pointed to in *A Scientific Autobiography*, was Paul Klee. It is interesting that in Benjamin's powerful last text "Theses on the Philosophy of History," a painting by Klee is the object of reflection.[83] The ninth thesis begins with the verse quoted at the beginning of this chapter, and Benjamin continues thus: *Fig. 7.25.*

> A Klee painting named 'Angelus Novus' shows an angel looking as though he is about to move away from something he is fixedly contemplating. His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. This storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress.[84]

The theses take the form of a sequence of literary fragments. Benjamin describes history as the advancement of humanity through wreckage and destruction, as heaps of debris. A cultural tradition rooted in repression, with each document of culture, also a document of barbarism, as he explains in the fragments leading to the passage above. While we experience history as a "chain of events," a sequence of parts, the angel sees, "one single catastrophe." We come back to *shock* and *lived experience*. The former standing for the single event within the latter totality. Although Benjamin's words should be acknowledged for their force, emotion, power, and are practically incomparable, they evoke a passage by Rossi in *A Scientific Autobiography*:

> It seems to me that modern architecture, as it originally presented itself, was a set of vague notions dominated by a secondhand sociology, a political deception, and a suspect aestheticism. The beautiful illusion of the Modern Movement, so reasoned and moderate, was shattered under the violent yet definitive collapse caused by the bombings of the Second World War. And I sought what was left not as though it were a lost civilization, but rather by pondering a tragic photograph of postwar Berlin where the Brandenburg Gate was still standing in a landscape of ruins. ... Only among the ruins of these places did the avant garde win and lose: in the tangible surrealist landscape and the layers of rubble, which are certainly a gesture, although a destructive one. Not the architecture but the city of man was struck; and what was left certainly did not belong to architecture. It was rather a symbol, a sign, at times a tiresome memory.[85]

Here Modern Movement is a failed utopia. Shattered and broken, yet in its ruined state, it is possible to select the singular monuments as the material for an eventual re-montage. First, clear away. Isolate the monuments of the city, those that contain the collective memory of the city. Embracing the destructive character with a view to construct something else. Rossi has written the following: "The construction of form and its destruction are two complimentary aspects of the same process."[86] Benjamin takes up the paradox of the destructive character thus: *Fig. 7.26.* *Fig. 7.27.*

> The destructive character knows only one watchword: make room; only one activity: clearing away. His need for fresh air and open space is stronger than any hatred.
>
> The destructive character is young and cheerful. For destroying rejuvenates in clearing away the traces of our own age; it cheers because everything cleared away means to the destroyer a complete reduction, indeed eradication, of his own condition. But what contributes most of all to this Apollonian image of the destroyer is the realisation of how immensely the world is simplified when tested for its worthiness of destruction. This is the great bond embracing and unifying all that exists. It is a sight that affords the destructive character a spectacle of deepest harmony.[87]

In this passage, Benjamin puts forward the paradoxical notion of a destructive character. A character that first makes room, clears away. Something like both the "tabula rasa" of the Modern Movement and the destruction brought on by

69. See Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction' (1936), in *Illuminations*, ed. by Hannah Arendt, trans. by Harry Zohn (London: Fontana Press, 1992), pp. 211–244.

70. Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development*, trans. by Barbara Luigia La Penta (Cambridge, Mass.: MIT Press, 1976). First published in Italy under the title *Progetto e Utopia*, in 1973. See p. 56, and p. 66.

71. Adorno quoted in Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-gardes and Architecture from Piranesi to the 1970s* (Cambridge, Mass.: MIT Press, 1990), p. 19. First published in Italy, 1987.

72. Adorno quoted in Manfredo Tafuri, *The Sphere and the Labyrinth*, p. 20.

73. See K. Michael Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer* (Cambridge, Mass.: MIT Press, 1995).

74. Hays, *Modernism and the Posthumanist Subject: The Architecture of Hannes Meyer and Ludwig Hilberseimer*, p. 7.

75. Ibid., p. 7.

76. See Georges Teyssot, *A Topology of Everyday Constellations* (Cambridge, Mass.: MIT Press, 2013).

77. Teyssot, *A Topology of Everyday Constellations*, p. 1.

78. See Teyssot, *A Topology of Everyday Constellations*, pp. 18-21. Refer Walter Benjamin, *The Arcades Project*, trans. by Kevin McLaughlin and Howard Eiland (Cambridge, Mass.: Harvard University Press, 1999), p. 461. Translation of Walter Benjamin *Das Passagen-Werk*, ed. by Rolf Tiedemann, 1982.

79. See Benjamin, *The Arcades Project*, p. 860.

80. See for example Arendt, 'Introduction: Walter Benjamin, 1892-1940', p. 9.

81. Theodor Adorno, 'A Portrait of Walter Benjamin', in *Prisms*, trans. by Samuel Weber and Shierry Weber (Cambridge, Mass.: MIT Press), 227–241 (p. 238). For literary montage see for example Benjamin, *The Arcades Project*, p. 460.

82. See Aldo Rossi, 'Autobiographical Notes on My Training, Etc. December 1971', in *Aldo Rossi: The Life and Works of an Architect*, trans. by Laura Davey (Köln: Könemann, 2001), pp. 23–25. Also refer Aldo Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 14–25.

83. Walter Benjamin, 'Theses on the Philosophy of History' (1940), in *Illuminations*, ed. by Hannah Arendt, trans. by Harry Zohn (London: Fontana Press, 1992), pp. 245–255. For a discussion of Benjamin and Klee's *Angelus Novus* in relation to Modernist architecture and in particular the work of Loos, see Cacciari, *Architecture and Nihilism*, pp. 143-149.

84. Benjamin, 'Theses on the Philosophy of History', p. 249.

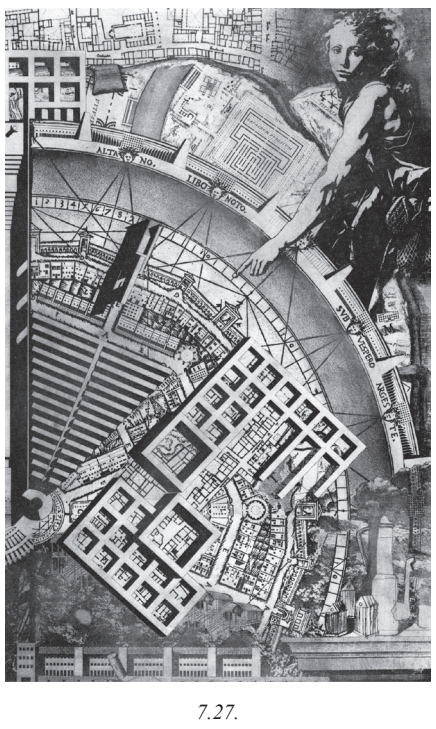
85. Rossi, *A Scientific Autobiography*, p. 82.

86. For Rossi refer Aldo Rossi, 'These Projects', in *Aldo Rossi: Buildings and Projects*, ed. by Peter Arnell and Ted Bickford (New York: Rizzoli, 1987), 10–11 (p. 10).

87. For Benjamin refer Walter Benjamin, 'The Destructive Character (1931)', in *Reflections: Essays, Aphorisms, Autobiographical Writings*, trans. by Edmund Jephcott (New York: Schocken Books, 2007), 301–303 (p. 301).

7.25.

7.26.



7.27.

7.25. Klee, Angelus Novus, 1920. In Benjamin's Theses on History, fragments of materialist and metaphysical thinking are juxtaposed, and interlaced.
7.26. The Brandenburg Gate on Unter den Linden, 1945. History as destruction and construction.
7.27. Rossi, The Analogical City, 1977. A version of Rossi's Analogical City collage panel. The top right quadrant of the Analogical City panel from 1976 is here cropped, and modified by Rossi. The San Rocco housing is montaged over the Vitruvian Ideal City and the Segrate monument is aligned with the Modena central spine. Note that not only is San Rocco remontaged, but also the San Rocco that was grafted onto Pavia. Now, San Rocco and Pavia are montaged over the Ideal City in a process of clearing away, destroying, replacing and rejuvenating.

war. Yet, destruction also rejuvenates, and so a will for humanist harmony is proposed as a complimentary aspect of the same process. Hence, it is not tabula rasa in the sense of the Modern Movement, but palimpsest. The surface is cleared, but the imprint of ruin is permanent. The destructive character embraces and unifies all that exists and has existed, symbol and sign, *shock* and *lived experience*, to confront the reality of history partially experienced in the present.

It is possible to speculate that these are some of the conceptual characteristics of the analogical city. We can understand the analogical city as something similar to the description offered by Benjamin on Klee's *Angelus Novus*. The analogical city is turned toward the past, like the *Angelus Novus*, which views the history of architecture as one single project, assembled but falling apart like all the drawings that Rossi produced. Assembled, with monuments and anonymous buildings, objects and territories. Likewise, Rossi looks toward the Canaletto painting, an imaginary Venice that is "built on top of the real one."[88] He sees Palladio's projects, substituted for his own, and all the other projects that are collectively held, preestablished and formally defined. Destruction and construction are equivalent with the process of de-montage and re-montage, which is the destructive character of Rossi's architectural production.

The destructive character pervades Rossi's architecture, and given formal definition in his drawings. As we have seen, Rossi's drawings of objects, bodies and buildings are superimposed and assembled together on top of one another. One drawing is built on another, the parts are broken and reassembled.

The same happens in his writing. *The Architecture of the City* opens with words of the city in ruined flux. "Anyone who remembers European cities after the bombings of the last war retains an image of disembowelled houses," Rossi writes, "amid the rubble fragments of familiar places remained standing."[89] *A Scientific Autobiography* as we will remember, is assembled from the many notebooks that Rossi kept.

Rossi's built projects too, always have some formal or conceptual character of destruction. From the Cuneo monument horizontal incision cutting through at eye level. The separation between private and public floors of the *Centro Direzionale*, its disconnection from the surroundings. The pool at Segrate separates the street and the piazza. The half-columns as ruins of a Stoa. Gallaratese is cut in two unequal pieces. Scandicci disintegrates into a sequence of linked pieces. The city hall and student housing in Trieste are but two pieces of a single project disassembled and reassembled. The analogical city collage panel, as we will see, tears apart David and Goliath, and the window breaks open the image to allow the city inside. San Cataldo Cemetery at Modena is an assemblage of fractured bones and the structure of a body as Rossi explained in *A Scientific Autobiography.*[90] This is Rossi's attitude of destruction and construction viewed as a process of montage, de-montage and eventual re-montage into future projects.

We have said many times that Rossi uses elements of his prior projects as the material for recombination into his new projects. We have discussed this in terms of both his buildings and his drawings. For instance, we have mentioned that the *Centro Direzionale* project in Turin can be read as a scaled up version of the monument at Cuneo, which is then transformed as the hollow cube at Modena. We have said that the circular giant-order columns of Gallaratese and Scandicci are interchangeable. We can see the plan of Fagnano Olona School at Modena Cemetery. We have discussed the same process in relation to Rossi's drawings, viewing the urban backgrounds as a stock of imagery that are positioned and repositioned in any number of other drawings in order to analyse each project in relation to its predecessor and its successor. It was with Rossi's project for Modena Cemetery that he explains that he realised the importance of this process of drawing and redrawing, of combining and recombining. As Rossi writes:

> In redrawing this design and in the very process of rendering the various elements and applying the colours to parts that required emphasis, the drawing itself acquired a complete autonomy *vis-à-vis* the original design, so much so that the original conception might be said to be only an analogue of the finished project.[91]

Elsewhere, Rossi described the same process and wrote the following about his redrawing of Modena Cemetery: "Rather than summarising the project for the Cemetery, it proposed another project."[92] We can be reminded here that Alberti said that it is the drawing that is architecture, and we can extend this to the visual technique of montage. With this is mind there is a close relationship between the analogical city as a concept, and the visual technique of montage. We should remember that Rossi's initial example of the analogical city was put forward as the painting by Canaletto which transposed the buildings by Palladio from Vicenza, to combine them in Venice. This destructive principle suppresses any boundary of time and space, allowing a momentary collision of past and present, and of preestablished architectural types to be formally defined within the framework of the analogical city.

The Analogical City: Panel

Let us turn to Rossi's collage panel, *La città analoga*. The architecture section of the Venice Biennale was established in 1980, with the theme *The Presence of the Past*, and directed by Paolo Portoghesi. Prior to this, architecture was part of the Visual Arts Sector of the Biennale.[93] In 1975, Vittorio Gregotti was appointed director of the architecture section and presented a small exhibition titled *A proposito del Mulino Stucky* which presented design proposals by architects, artists, and local representatives of Venice to discuss the future of abandoned granary mills on the Guidecca. As Gregotti has said, it was the exhibition of the following year in 1976 that he views as significant.[94] Produced for the Venice Biennale in 1976, Rossi submitted the *Città Analoga* collage, a collaborative project. Once again in the role of director of the architecture section of the Biennale, Gregotti put forward three components: "The Werkbund 1907, the Origins of Design;" "Rationalism and Architecture in Italy during the Fascist Regime;" and, "Europe-America Historical Centre - Suburbia" an exhibition of modern architecture featuring a group of European and American architects, in order to compare the positions, according to the thematic title.[95]

Eisenman coordinated the American side calling for, "an exhibit which is not retrospective, but rather one which deals with a current program with new ideas and new solutions."[96] Eisenman selected architects who were, "both practitioner and theoretician."[97] It is interesting to compare Eisenman's request for new theory, with the objective asked of the European architects: "to accept the limits and character of their own competence, not allowing themselves to go beyond the practical world of their own competence."[98] It is with this context that we should view Rossi's contribution to the Biennale with his *città analoga* collage, as a theoretical project, and a sharp provocation to thinking on the theme of the historic centre.

Probably one of Rossi's most recognisable works, the *Città Analoga* ("*Analogical City*") collage is also perhaps one of his most enigmatic projects. Rossi himself has said very little about it, and although the project appears in the journal *Lotus* in 1976, Rossi offers no analytical commentary on the content of the collage nor on the design method.[99] He does say, albeit opaquely, the theme expressed in the panel, "concerns the relation between reality and imagination," and that it is, "important to illuminate the threads that lead imagination back to reality," because imagination is a "concrete thing."[100] On the method, Rossi said that its designers constructed the panel, "to a varyingly automatic extent," introducing, "things, objects and memories."[101] *Fig. 7.28.* *Fig. 7.29.*

Rossi begins his essay in *Lotus* by commenting on the condition of the city. He remarks on the following: the "anger of the homeless," the empty houses of centre and periphery, and in particular the historic centre, have come not from architects, but government officials, economists, politicians, and town councillors.[102] "After the impulse of the early postwar years and a few good suburban districts of Rome and Milan," Rossi writes, "very few healthy

88. Aldo Rossi, 'La Città Analoga: Tavola / The Analogous City: Panel', *Lotus International*, 13 (1976), 4–9 (p. 6).

89. Rossi, *The Architecture of the City*, p. 22.

90. This project is associated with a car accident that Rossi was involved with in April 1971, en route to Istanbul, between Belgrade and Zagreb. See Rossi, *A Scientific Autobiography*, p. 11.

91. Rossi, 'An Analogical Architecture', p. 74.

92. Aldo Rossi, 'My Designs and the Analogous City', in *Aldo Rossi in America: 1976-1979*, trans. by Diane Ghirardo (IAUS New York: MIT Press, 1979), 16–19 (p. 18).

93. See Aaron Levy and William Menking, *Architecture on Display: On the History of the Venice Biennale of Architecture* (London: Architectural Association, 2010).

94. The Biennale website puts the first Architecture Biennale as Gregotti's *A proposito del Mulino Stucky* at the Magazzini del Sale at Zattere (1975); then: *Werkbund 1907. Alle origini del design* (1976), *Il razionalismo e l'architettura in Italia durante il fascismo* (1976), *Europa-America, centro storico, suburbio* (1976) at the venues: Ca' Pesaro, San Lorenzo, Magazzini del Sale, and Fondazione Cini; and the last before architecture became independent of art: *Utopia e crisi dell'antinatura. Intenzioni architettoniche in Italia* (1978) at Magazzini del Sale alle Zattere. See http://www.labiennale.org/en/architecture/history/intro.html?back=true [accessed 26 August 2013].

95. See Vittorio Gregotti, *La Biennale Di Venezia 1976* (Venice: Alfieri Edizione d'Arte, 1976).

96. Ibid., p. 253.

97. Ibid., p. 253.

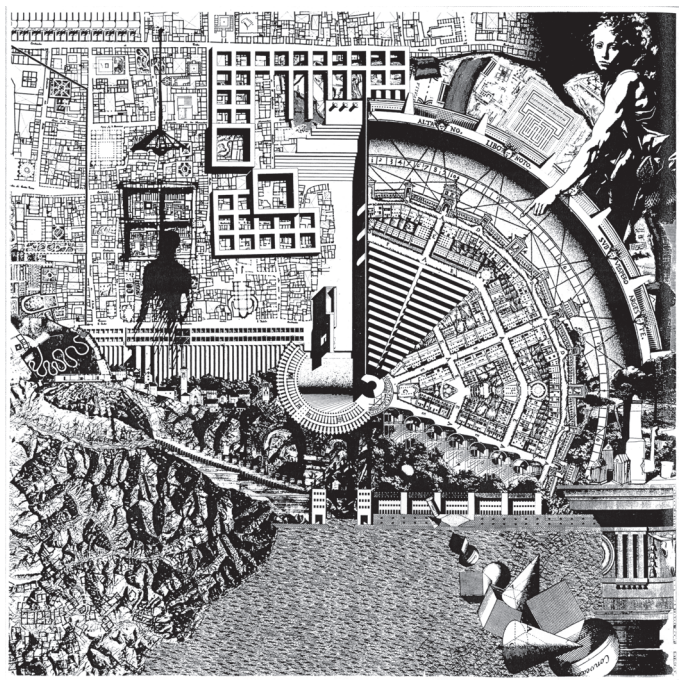
98. Ibid., p. 237.

99. Aldo Rossi, 'La Città Analoga: Tavola / The Analogous City: Panel', *Lotus International*, 13 (1976), 4–9.

100. Rossi, 'La Città Analoga: Tavola / The Analogous City: Panel', pp. 5-6.

101. Ibid., p. 7.

102. Ibid., p. 5.



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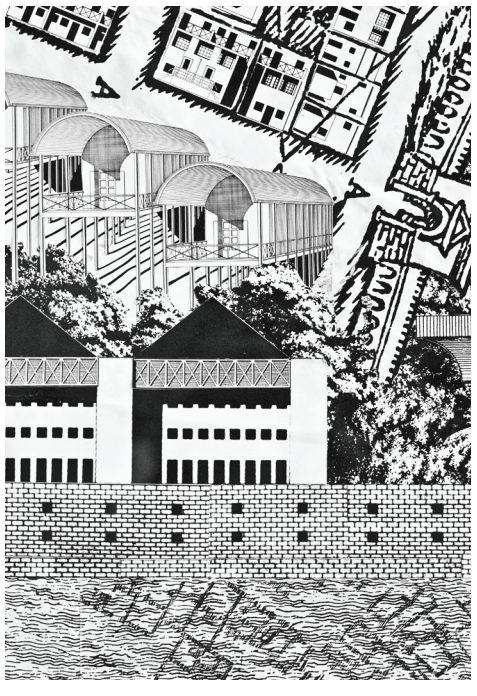

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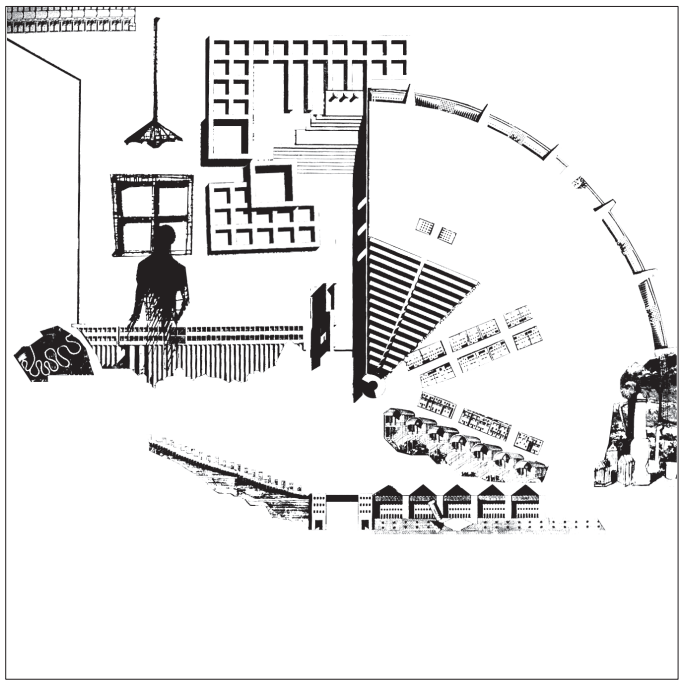

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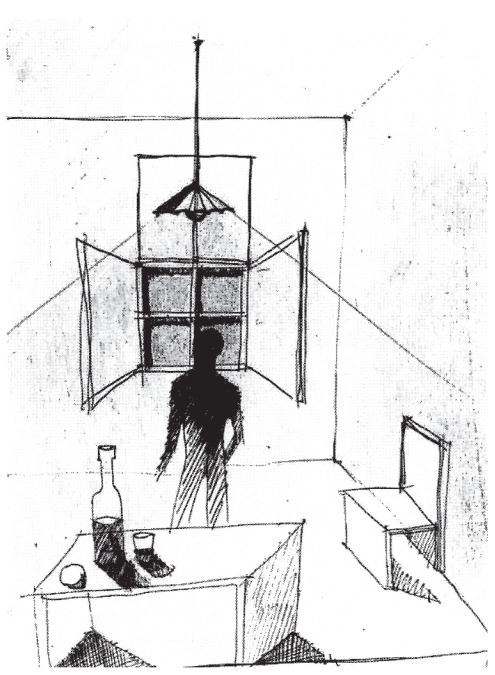

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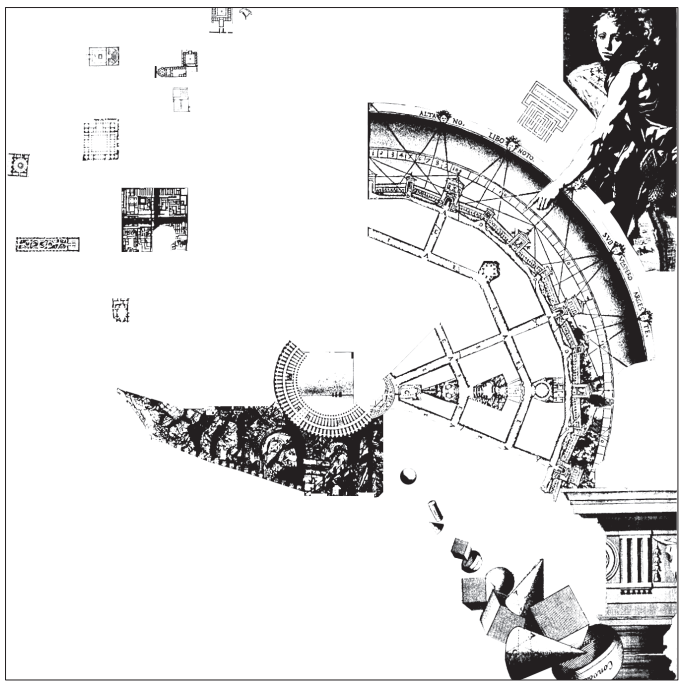

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7.33.

7.28. Rossi, Analogical City Panel, 1976. The città analoga collage. Disorientatingly dense, yet controlled in composition. The window duplicates the frame of the collage, and the figure duplicates the position of the viewer. The single figure represents the multitude and the mind takes form in the city as we are reminded that it is human labour – mental and manual – that produces the city.

7.29. Photograph detail by author of the lower horizon line, where the water edge meets the built edge, and the elevation meets the plan. Rossi's buildings are grafted onto the Ideal City of Vitruvius.

7.30. Authors de-Montage isolating the projects by Rossi.

7.31. Rossi, Spazio chiuso, interno, 1974. Sketch study that Rossi used as the figure represented on the left of the collage.

7.32. Author's de-Montage isolating the projects by others.

7.33. Tanzio da Varallo, Davide e Golia, 1625. David with the head of Goliath. In Rossi's collage, the head is substituted by the pointing finger of David.

propositions have actually come from architects: and there have been absolutely none from the theorists and critics."[103]

Writing in the same issue of *Lotus*, Tafuri put forward the first analysis of Rossi's project.[104] His essay is entitled "*Ceci n'est pas une ville*," after Magritte's drawing *Ceci n'est pas un pipe*, in which the inscription at the base of the drawing of a pipe affirms its autonomy in relation to what it signifies: the text itself is not the pipe. Tafuri first discusses the idea of collage and photomontage in the work of Heartfield, Schwitters, Piranesi and Canaletto, before considering the collage of Rossi.

Photomontage can be situated within the work of Heartfield and Grosz, whose photomontages communicated the ethos of the fragmented and chaotic early twentieth-century city, by the nonverbal language of photomontage. The 1916 print *Memory of New York* by Grosz is an assemblage of high-rises, figures, flags, transport, with the repeated pattern of windows interspersed with single words and partial sentences. *Life and Bustle in the Universal City* was jointly made, Grosz's drawing underneath Heartfield's explosion of photographs, newspaper headlines, figures, phones, and clocks. The method of collage, the placing of objects and images, there isolation as autonomous parts and connection within a greater whole, the process of separation and integration is conceptually related to what we have said on autonomy as a form of opposition and integration. That the method of montage – of positioning and counterpositioning, of separating and integrating – is like the political moment of architecture which frames urban life – formally and conceptually – through architectural form. Tafuri has written, "The critical act will consist of a recomposition of the fragments once they are historicized: in their remontage."[105] For Tafuri, the Analogical City collage expresses the "anxiety" of Rossi's mind, and at the same time, Rossi's desire to, "embrace dreamed reality ecumenically."[106]

Fig. 7.35.
Fig. 7.36.

Let us inquire into the project, a collaboration with Eraldo Consolascio, Bruno Reichlin, and Fabio Reinhart. As a collaborative project, the *Città Analoga* collage is intrinsically about shared experience, common and collective knowledge, an ethos that necessitates decision, exchange, common values, productive conflict, and collective discussion. The original image is a collage measuring approximately two metres square, made up of paper and acetate photocopies. Lithograph prints were then made at a reduced size for the exhibition.

The panel composes individual works by Rossi, and works that he made with collaborators, as well as Rossi's references onto the background of a city. Rossi has said that the background merges northern Lombardy, Lake Maggiore, and the Canton Ticino.[107] On the terrain to the left we can read the word "Piemonte," which is the region in Italy that joins Lombardy to the east and the Alps to the north. The collage mixes ancient and modern, topography and history, Medieval, Renaissance, and Enlightenment architecture, built and unbuilt, with objects and figures. When we divide the square image, the upper half is mostly a plan, while the lower half is made up of an elevation and the suggestion of perspective. As is clear, the left is primarily gridded, while the right is radial.

Fig. 7.30.
Fig. 7.31.

At the centre is an amphitheatre plan connected to the wall of Rossi's Segrate Piazza, which casts a long shadow, and the conical grave of his Modena Cemetery. Within the centre is a perspective image by Superstudio. To the left of the central amphitheatre is an elevation of Rossi's Gallaratese housing, which leads to the winding path of his project for Scandicci. From here, the Bellinzona Bridge and City Wall follow the terrain south toward the water edge. The City Wall joins the plinth of the Trieste City Hall, with the Trieste pitched-roof atria repeated five times. Below this is a sequence of geometric volumes in perspective from an image in Laugier's second essay on architecture. Adjacent is a coffee pot and sketch studies of Rossi's cabins at Elbe balanced like a still life on top of a Doric Entablature from Palladio's *Four Books*.

Returning to the centre of the image and with the Segrate wall which forms a vertical division. Above this is Rossi's extruded grid of courtyard housing for San Rocco, and at the top left edge, we can find his single-family row housing for Broni. The focus of this part of the image is the standing figure, a crucial visual motif in Rossi's drawn work. The figure looks through a window with a lamp above and we can make out the line of a wall and ceiling further left.[108] Within the window is the Knossos palace, the most ancient of all the buildings depicted in Rossi's collage. While the figure in the room implies the intimacy of private life, of personal desires and tragedies, the window represents a view, light, air, an opening for the exchange of words and goods. The window articulates interior and exterior, its square form duplicating the form of the collage panel itself as well as the cross as the quadrants of the city. The window pulls the city into the house, but it also signifies a breakage, a point of vulnerability, insecurity, and the momentary disintegration of any *long duration*. Yet, the figure also represents the subjectivity of the viewer, as we gaze at the collage. A duplication of forms and figures occurs and we are enveloped within the apparatus of the *Città Analoga.*

We can be reminded of the formal duplication of frame and view at work in Manet's paintings such as *The Balcony* (1868) or *A Bar at the Folies-Bergère* (1881). In the former, the balcony window doubles the canvas and we are pulled into the hollow and dark space of the window. In the latter, the figure is duplicated in the mirror, yet also negated because the figure is not positioned as a reflection. Representation and reflection are distorted.

Fig. 7.34.

To turn now to the top right of the image, we can see another figure with a pointing finger. It is David from a painting by the Lombard painter Tanzio da Varallo, in which da Varallo's David is holding the head of Goliath. In the image by Rossi, the head is replaced by the finger, which directs us to the centre of the collage, the centre of the city, the historic centre. As our gaze moves to the centre, we linger over the slabs of ossuaries from the central part of the Modena Cemetery, which forms a triangle in plan, the point focused on the centre. This is superimposed over the radial plan of an Ideal City, drawn by Palladio from Vitruvius, within which Rossi's mews housing for Robbiate are placed, along with Alessandro Specchi's Piazza di Spagna and Santa Costanza in Rome. The plan joins with the bedroom wings of Rossi's villa-pavilion at Borgo Ticino which in turn join with the dark foliage which surrounds the Trieste City Hall, toward the water edge.

Rossi writes of the importance in measuring one's own projects and other people's within a single main project. Thus, we can find embedded within the fabric of the analogical city, work by Palladio, Borromini, Michaelangelo, Bramante, Piranesi, Le Corbusier, and Terragni. To cite a selection, Terragni's Danteum of 1938 is positioned left of the larger courtyard of Rossi's San Rocco housing. Above this is the Bayezid Complex in Istanbul, while Le Corbusier's Ronchamp floats within a courtyard on the top edge of the image. Left of the standing figure we can see Palladio's Palazzo Thiene from Vicenza on the corner of a street, and Bramante's Tempietto further left. Below the Tempietto we can find the vestibule to Michelangelo's Florence Laurentian library. Borromini's Basilica of St Charles aux Quatre-Fontaines, is located at a street junction, next to the left hand of the standing figure. Below this and underneath Gallaratese, is the image of a hill town. To the right of this in the dark patch below the amphitheatre is one of Piranesi's Carceri etchings. We also find another fragment of Piranesi, the labyrinth baths from his Campo Marzio, adjacent to the arm of David from da Varallo's painting.

Fig. 7.32.
Fig. 7.33.

Let us note that Rossi commented on the need to propose "alternatives," so that, "these alternatives can be discussed, understood and hence either accepted or rejected."[109] We can thus say that the analogical city proposes an alternative city, separate and distinct to the current city, yet analogous to it. A counter project within the capitalist city, square in plan, opposing the logic of flows. We can end by noting a statement by Rossi in another text, and although for a different project, his words are illuminating for our discussion:

> This project for a modern city, made up of pieces and monuments brought together in a single order, where as in all great endeavours (revolutions, for example) - different characters emerge with their experiences and their myths - represent a great hope and alternative to the ugliness, the myopia, the exploitation and all the limitations of our city.[110]

Modena Cemetery and the Analogical City

To end this chapter it is interesting to analyse the San Cataldo Cemetery at Modena. A crucial project in the work of Rossi, it was undertaken between 1971 and 1984, but remains unfinished.[111] Modena is a north Italian city between

103. Ibid., p. 5.

104. There have been several analyses of this image. See Manfredo Tafuri, 'Ceci N'est Pas Une Ville', *Lotus International*, 13 (1976), 10–13. Also refer Jean-Pierre Chupin, *Analogie et théorie en architecture: De la ville, de la ville et la conception, même* (Gollion: Infolio, 2010), pp. 127-192; and Carsten Ruhl, 'Im Kopf Des Architekten. Aldo Rossis La Città Analoga', *Zeitschrift für Kunstgeschichte*, 69 (2006), 67–98. The latter two have not been translated into English.

105. Tafuri, *The Sphere and the Labyrinth*, p. 15.

106. Tafuri, 'Ceci N'est Pas Une Ville', p. 13.

107. Rossi, 'La Città Analoga: Tavola', p. 7.

108. The shadowy figure appears in countless of Rossi drawings. For numerous examples, refer Aldo Rossi, *Aldo Rossi: Drawings and Paintings*, ed. by Morris Adjmi and Giovanni Bertolotto (New York: Princeton Architectural Press, 1993); Aldo Rossi, *Aldo Rossi: Drawings*, ed. by Germano Celant, trans. by Paul Metcalfe (Milan: Skira, 2008).

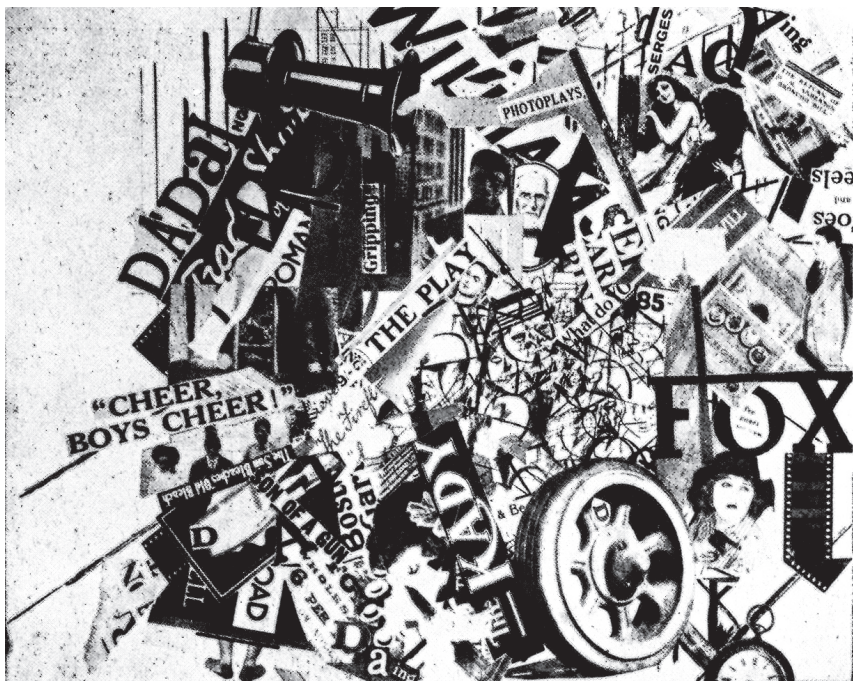
109. Rossi, 'La Città Analoga: Tavola', p. 7.

110. Aldo Rossi, 'The Tower of Babel (1967)', in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Niall McCullough and Valerie Mulvin (London: Architectural Design, 1983), p. 39. Introduction to the book *La torre di Babele*, by Ludovico Quaroni, 1967.

111. This project is well documented. See Rafael Moneo, 'Aldo Rossi: The Idea of Architecture and the Modena Cemetery' (1976), in *Oppositions Reader: Selected Readings from a Journal for*

7.34.

7.35.



7.36.

7.34. Édouard Manet, The Balcony, 1868. The painting imitates and duplicates itself as the canvas is reproduced by the window that Manet depicts, seemingly enveloping and framing the figures.
7.35. George Grosz, Memory of New York, 1915-16. A drawn montage of skyscrapers, trains, flags, figures, and text that evokes the literal and conceptual flow of the city.
7.36. John Heartfield and Grosz, Life and Bustle in the Universal City, Five Past Noon, 1920. A joint photomontage project between Heartfield and Grosz. The under drawing is by the latter, with the former grafting photograph fragments, film strips, and newspaper headlines onto the drawing.

Parma and Bologna, and within two hours by train of Milan. In 1971, the Modena municipality announced a competition to design a new cemetery situated on land adjacent to its current nineteenth-century cemetery designed by Cesare Costa, which lies northwest of its city centre. The following year, Rossi, who had submitted a design in collaboration with Gianni Braghieri, was declared the winner, but it was not unanimous. According to Eugene Johnson, those who favoured Rossi's proposal said that it was a unifying and coherent whole. As a project concerned with the idea of the city, Rossi's project put forward an alternative to the disorder of modern cities. Those against the proposal said that the monumental forms and "collective ethos" sacrificed the feelings of the individual.[112] Rossi revised the project, and in 1976 put forward another version, which is the one that is now partially built.

Let us note the changes between Rossi's initial 1971 proposal, the revised 1976 scheme, and its eventual state. Turning to the site plan, we can see that Rossi duplicates the overall rectangular form of the existing cemetery and both align with one another. Along the short axis Rossi arranges a hollow cube, a two-storey U-plan building, rows of slabs within a triangular plan, and a truncated cone. These elements are set within the grounds of a two-storey perimeter block. In this first proposal, a grid of subterranean columbaria were included underneath the burial fields. The central triangle of slabs contains the ossuaries. When extruded they increase in height as the plan shortens to a point, so their formal logic is reversed. The cube is described as a sanctuary for war dead, while the cone is a communal grave. The sanctuary is for those who have died and are known, while the communal grave is reserved for the unknown dead, as Rossi explains in his accompanying text "The Blue of the Sky."[113] He proposes that the sanctuary-cube is an abandoned house, and the communal-cone is a factory chimney.[114] The U-plan building has a portico at ground floor with columbaria in the floors above. The perimeter buildings contains further columbaria and is interrupted on the central axis with a gate within the perimeter and on the short axis. At ground floor, thick piers form a portico to the inner side and a wall on the outside. The perimeter building has a triangular roof. As a composition, the cemetery refers analogically to a walled city, because the subterranean grid of columbaria and the individual buildings of cube, cone, and slab remind us of the gridded city contrasted by its singular monuments.[115]

Fig. 7.37.

In the 1976 proposal the subterranean columbaria were eliminated. In order to accommodate the extra columbaria, the enclosing perimeter building was raised to three storeys. However, the north edge of the enclosing block was removed and replaced by a long terrace of steps. The removed piece was repositioned as a long slab aligned with the east edge of the perimeter. Connecting Rossi's proposal to the existing cemetery are two square plan blocks of administration. Note that the cemetery is now shifted from its initial position.

Fig. 7.38.

Building started in 1978 but halted in 1984. In its current state, one half of the inner U-plan building is complete. The hollow cube, the repositioned slab, and most but not all of the perimeter building are finished. The triangular ossuaries and the conical grave remain unbuilt. Also unbuilt was the north terrace of steps. The courtyard administrative buildings that we see between Rossi's cemetery and that of Costa's, remain unbuilt as well.

As we have discussed in prior chapters, Rossi used a stock of self-similar forms in each of his projects. The Modena project is useful for pointing out a number of these. From his school at Fagnano Olona, the central extending wings and the circular plan of the library are repeated in the U-plan of Modena and the truncated cone. From Gallaratese, Rossi borrows the thin piers of columns for the connecting slab of the cemetery on the east edge. The square window openings likewise can be found at Gallaratese and Fagnano Olona amongst other projects. The focus on isolating a sequence of elements on an axial layout is a common formal principle of Rossi, as can be seen again at Fagnano Olona, and also for instance at the Scandicci City Hall. The triangular roof of the perimeter has precedent at, for instance, the Triennale Bridge and Segrate monument. The subterranean grid is the diagram from San Rocco housing. The hollow cube is a scaled down version with small square openings of Rossi's 1962 *Centro Direzionale* for Turin, or an alternative version of the monument at Cuneo.

The repetition inherent to Rossi's work, its serial production is the commitment to articulating a clear formal language. Persistent themes such as the duplication of self-similar forms, and their confrontation with opposing and isolated forms, axial plans, are some of the formal characteristics that are evident in all of Rossi's work. The axial plan is raised here as an important conceptual characteristic that combines analogical thinking as a form of montage. In Rossi's work, the idea of linking with other projects, and for the substitution of those projects with Rossi's own can be viewed when we montage along a central axes, any number of other projects. The following are but a few examples.

We have already indicated that at Fagnano Olona a similar plan to the Enlightenment hospital. Partly this was due to the sliding of one axially planned building for another. We can take Modena cemetery as another example and think of Piranesi's plan for the *Campo Marzio*. In particular the area around Hadrian's Mausoleum (Castel Sant'Angelo). Cutting it on the long axis, the mausoleum plan can be seen in Rossi's hollow cube. It follows that the circular basilica in the *Campo Marzio* is connected with the truncated cone of Modena, and we can see the fan shaped structure substituted for the triangular plan of the ossuaries in Rossi's project. Either side of the fan shaped structure of this part of the *Campo Marzio* are steps, similar in form to the proposed terrace in Rossi's 1976 proposal for Modena. Elsewhere, we can see the small openings from Ledoux's Prison set against a large surface in Rossi's perimeter wall. While Loos' Michaelerplatz building (1911) or his Otto Haas-Hof (1924), when cut along its horizontal datum, is substituted for the upper half of Gallaratese, and in turn becomes part of Modena. The principle of montage combines and substitutes projects by Rossi and others as part of Rossi's analogical production that is a synthesis of analysis and design.

Let us turn now to the relations between Rossi's aesthetic and intellectual dialogue with, on one hand the Modern Movement, and on the other, the Postmodern turn. The Modena Cemetery again provides an interesting backdrop to this discussion because its "completion" in 1984 coincides with a period in which cultural theorists such as Fredric Jameson used architectural examples to help define a general "postmodern" ethos.[116] It was a transition period from Fordist production up to the 1970s and to post-Fordist production. From assembly line labour processes concentrated in the factory, to service sector labour processes dispersed through global communication networks. In Michael Hardt's introduction to *Capital and Language* he comments that while factory labour was in many ways "mute," the labour of post-Fordism is "loquacious."[117] "Language and communication are crucial for the production of ideas, information, images, affects, social relationships," Hardt writes.[118]

Let us take up the notion of language in connection to the idea of type as the language of architectural form. First with language from the point of view of its biological foundation, then the formal and conceptual language of architecture. As Marazzi reminds us in *Capital and Language*, language is neither purely historical nor purely natural. It is not historical because language is not a product of human invention. It is not natural because language has to be learned. Instead, Marazzi describes the circularity of a desire for language, and the instrument of language, and that our language faculty developed physically and in relation to others. "If we consider language to be not only an instrument used in institutional reality to *describe* facts," Marazzi writes, "but also to *create* them, then in a world in which institutions like money, property, marriage, technologies, work itself, are all *linguistic* institutions, what moulds our consciousness, language, becomes at the same time an instrument of production of those same real facts. *Facts are created by speaking them.*"[119] Thus, Marazzi delineates the relation between naming and describing, communicating, creating, and producing form. Life and language, human and linguistic relations, form a dialectic.

As we have said, Rossi and others put forward a discourse on architecture as analogous to structural linguistics, in which the collectively held and typical structure of language underlines individual acts of speech. Translated into architecture, the typical structure of the history of the city became the material

Ideas and Criticism in Architecture 1973-1984, ed. by K. Michael Hays (New York: Princeton Architectural Press, 1998), pp. 105–134; Eugene J. Johnson, 'What Remains of Man: Aldo Rossi's Modena Cemetery', *Journal of the Society of Architectural Historians*, 41 (1982), 38–54; Luigi Ghirri, 'The Cube and the Portico', *Lotus International*, 38 (1983), 37–44; Vittorio Savi, 'The Aldorossian Cemetery: Outline of a Critical Account', *Lotus International*, 38 (1983), 30–36; K. Michael Hays, ed., *Architecture Theory Since 1968* (Cambridge, Mass: MIT Press, 1998), pp 68-71; Aldo Rossi, 'The Blue of the Sky: Modena Cemetery, 1971 and 1977', *Architectural Design*, 52 (1982), 39–41; Aldo Rossi, 'The Blue of the Sky' (1971), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Marlene Barsoum and Liviu Dimitriu (London: Architectural Design, 1983), pp. 40–47.

112. Johnson, 'What Remains of Man: Aldo Rossi's Modena Cemetery', p. 38. Notably Paolo Portoghesi and Carlo Aymonino were amongst the competition jury and were both positive.

113. Subsequent references to Rossi's writing on this project will be from Aldo Rossi, 'The Blue of the Sky' (1971), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Marlene Barsoum and Liviu Dimitriu (London: Architectural Design, 1983), pp. 40–47. Other versions have missing paragraphs.

114. Rossi, 'The Blue of the Sky' (1971), p. 42.

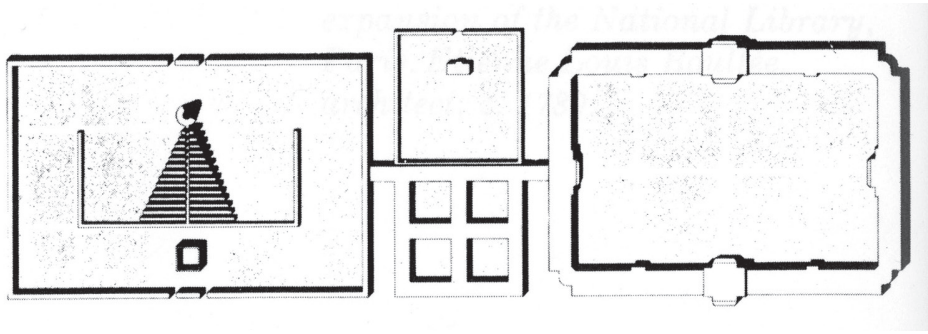
115. Ibid., in particular p. 46.

116. Refer Jameson's essay 'Postmodernism, or The Cultural Logic of Late Capitalism', *New Left Review* 146 (July-August 1984) 53-92. Also see Fredric Jameson, *Postmodernism: Or, the Cultural Logic of Late Capitalism* (London: Verso, 1991).

117. See Michael Hardt, 'Introduction: Language at Work', in *Capital and Language: From the New Economy to the War Economy* (Los Angeles, CA: Semiotext(e), 2008), 7–11.

118. Hardt, 'Introduction: Language at Work', in *Capital and Language: From the New Economy to the War Economy*, p. 10.

119. Christian Marazzi, *Capital and Language: From the New Economy to the War Economy*, trans. by Gregory Conti (Los Angeles, CA: Semiotext(e), 2008), p. 33. Italics are Marazzi's.



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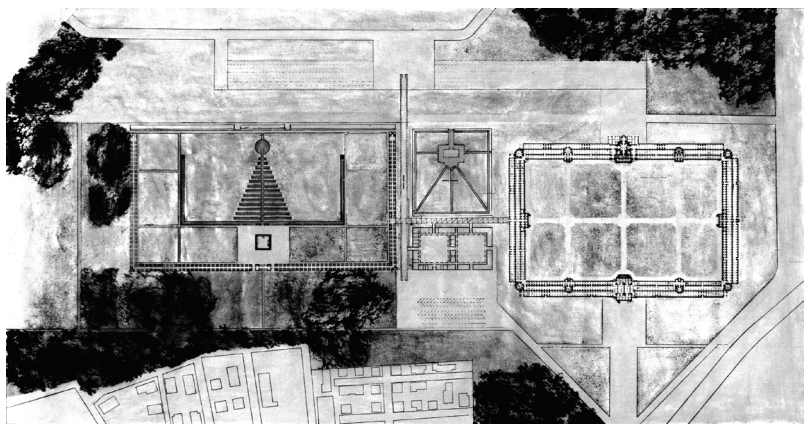

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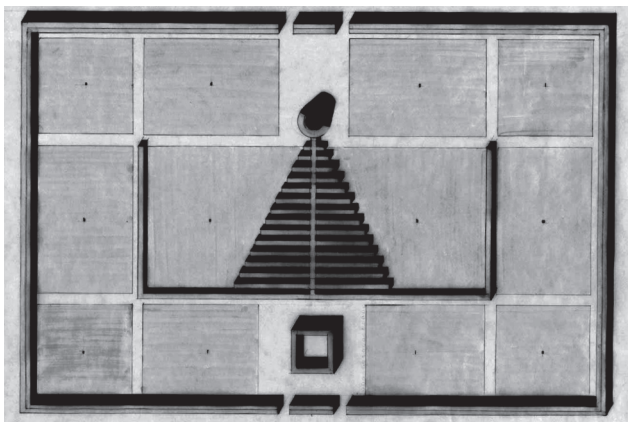

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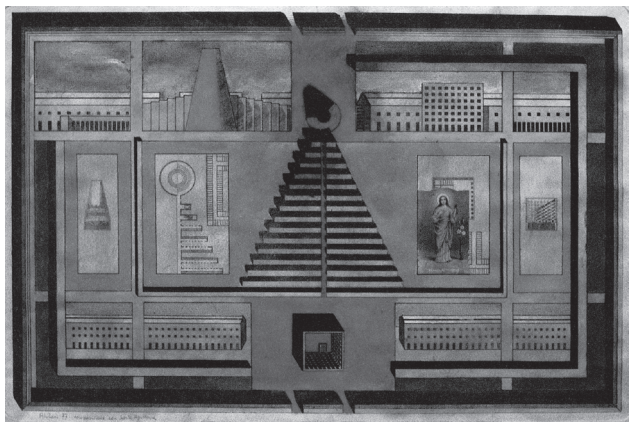

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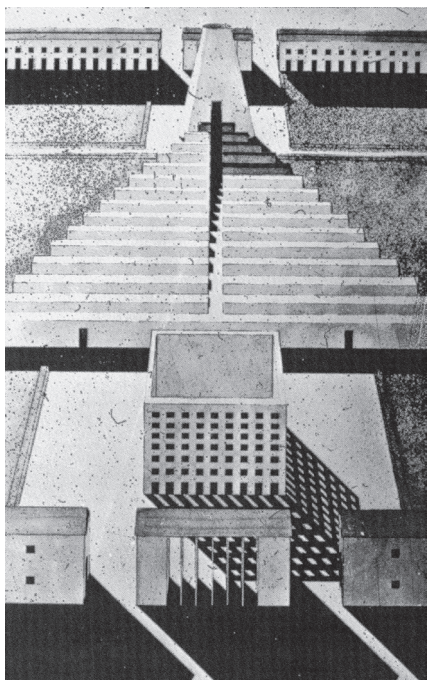


7.41.

7.37. Rossi, Site Plan for Modena Cemetery, 1971. The first project fully encloses the separate elements of the cemetery within a perimeter block, which duplicates the existing cemetery.
7.38. Rossi, Site Plan for Modena Cemetery, 1977. The north wall of the perimeter block from the first project is rotated and aligned parallel with the short side of the perimeter block to the east, and the cemetery is shifted from its alignment with the existing cemetery.
7.39-7.40. Comparison between the drawings of Rossi's initial site plan (1971), and its reproduction as the base image for a collage made in 1977. Note the reduced representational language of the former drawing and the application of figurative images in the latter drawing that mix plans, elevations, sections, and objects. In the former we see a reduced formal language focused on the simple extrusion of a typical-form. In the latter, Rossi emphasises iconographic forms.
7.41. Rossi, etching, view of central section of Modena project.

for individual rearrangement and recombination that gave rise to the singularity of architectural form. A singularity of form that is always in dialogue with the entire history from which it was produced because like language, architecture is based on historically determined social and cultural relations as well as its own aesthetic tendencies that are neither entirely natural nor entirely invented but co-determining. The result is an artefact with an already partial history. The purpose of this tendency was to question the aesthetic and intellectual premise of the Modern Movement in the 1920s, which rejected the history of the city and instead developed architecture according to the principle of industrial production and as a causal relation between function and form.

It is interesting to compare a selection of Rossi's drawings of Modena Cemetery at this point. On one hand, the axial composition is related to Enlightenment institutional architecture, in contrast to the asymmetrical compositions which are characteristic of the Modern Movement. Think of Gropius' Bauhaus (1925-26), the League of Nations projects by Meyer or Le Corbusier (both 1927). On the other, Rossi borrows the schematic rationale and formally reduced architectural language of Hilberseimer or Loos. Rossi's initial project for Modena is the unadorned extrusion of a geometrical diagram. Yet, in the second proposal, Rossi's formal language changes in both the drawn representation, as well as in the eventual construction. There is a dialectic between Enlightenment architecture and early Modern Movement architecture, so axial to asymmetrical-planning. We can also remember that the Modern Movement was premised on an ethos of efficient industrial production, and reflected in the aesthetic representation, without an emotional referent. Yet, in the second proposal, referential material is used in the drawing such as the figure of a Saint, and the composition itself is anthropomorphic. There is a tension between the abstract and the figurative, between the aesthetic language of the Modern Movement based on a Fordist ethos of knowledge accumulated in machines, and a turn toward a post-Fordist and postmodern ethos of knowledge accumulated in the bodies of people, as imagination.[120]

Fig. 7.39.
Fig. 7.40.
Fig. 7.41.

Summary

Having situated the analogical city by recalling the authors that Rossi turned to for conceptual orientation – Charles Baudelaire's "analogical approach" in his poem *correspondances*, Giovanni Antonio Canaletto's painting of an "analogical Venice," Carl Jung's "analogical thinking," and René Daumal's surrealist novel Mount Analogue – we examined Rossi's collage panel Analogical City and put this forward as a counter project, before analysing the Modena Cemetery. Rossi viewed his architectural production as a contribution to both the collective knowledge of architecture itself and as an intellectual contribution to the social and political struggle of the city. Hence it is possible to read the analogical city as having both formal-poetic and conceptual-political aspirations related to Rossi's idea of architectural autonomy. Connected to this, we said that the analogical city is a work of a potential future presence because as a montage the analogical city is a thought – potentiality – becoming a thing – which is actuality. The analogical city is thus in continual dialogue with the real and with the imaginary, with history and with the imagination. The analogical city destroys what has gone before, but like Benjamin's destructive character, this destruction is not a loss. Destruction in the analogical city makes room. It liberates the mind and opens the space of potentiality. The analogical city overcomes this destruction and brings forth the hidden, as something new and transformed. We will clarify the relation between potentiality and actuality inherent to the analogical city in our concluding words.

120. For a discussion on Fordist and post-Fordist thinking, refer Marazzi, *Capital and Language*, pp. 36-48; and Paolo Virno, *A Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*, trans. by Isabella Bertoletti, James Cascaito, and Andrea Casson (Los Angeles, CA: Semiotext(e), 2004), pp. 35-40.

8.
CONCLUSION
THE ANALOGICAL CITY AND URBAN SCALE

Description and Transformation: A Rossian Conceptual Framework of the City as Architecture

The Idea of Type, Formal Autonomy, and Political Form

The City as an Artefact and the Analogical City

Analogical City and the Category of History as Collective Imagination

The Apparatus of Imagination and the Analogical City as Political Form

Mind takes form in the city; and in turn, urban forms condition mind.

Lewis Mumford, *The Culture of Cities*, 1938.[1]

The history of the city is the history of civilisation.

Aldo Rossi, *The Architecture of the City*, 1966.[2]

With this, and being at once personal and collective, architecture is the most important art form and science because its cycle is as natural as that of man - and it is also all that remains of man.

Aldo Rossi, *Introduction to Architecture, essai sur l'art*, 1967.[3]

The purpose of our inquiry has not been to provide an exhaustive account of Rossi's architectural production. Instead, we have focused on a set of theoretical categories that are considered as simultaneously specific to Rossi, yet also crucial points of wider disciplinary reference. This investigation has been maintained by deriving concepts from different authors and from different areas of study. We have done so for the following two reasons: on one hand, the scope of Rossi's thinking necessitated a variety of analyses from a variety of viewpoints; on the other, we have maintained that architecture is part of cultural production – as the statements that open this chapter make clear – so contributes to shaping social relations as well as mental conceptions, and is embedded in the sphere of power and economy. When we recognise this, we can borrow terms of reference from fields "external" to architecture and assert architecture's reciprocal relation with them.

Each chapter to this point builds on the preceding chapter and in doing so, only one part of the whole is really ever put forward. In chapter's two and three, we delineated the overall methodology, put forward the significance of a conceptual vocabulary and formal analysis, then documented the author's visual work undertaken throughout this PhD. In chapter four we analysed Rossi's *The Architecture of the City*, de-montaging the main theoretical categories. This was situated in relation to a selection of important projects by Rossi and others, during the years prior to the publication of *The Architecture of the City.* Then, chapter's five, six, and seven developed according to the following categories: the idea of type, the notion of architectural autonomy, and the concept of the analogical city. In each case, the category of history as collective imagination has underlined much of our discussion.

To reiterate, the categories under discussion were selected for two reasons. First, because they are particular to the theory and practice of Rossi, and second, because we can say that they are major theoretical categories of architecture. Of the categories, type is for sure the most specific to architecture, while autonomy has broader cultural and discursive reach, as we have said, in the arts, philosophy, and political theory. Yet both categories are recognised as part of the conceptual vocabulary of architecture. By contrast, the analogical city is a discovery of Rossi. We can say this because, although analogical cities have existed within the history of architecture as, for instance, counter projects, ideal cities, theoretical utopia's, and as intellectual strategies, it was Rossi who put forward the term "analogical city" to signify the deeper conceptual relations and compositional characteristics of counter projects, ideal cities, and utopia's. As such we situated type and autonomy within a wider discussion of type and autonomy in architecture, while for the analogical city, we focused on Rossi's own thinking on analogy. Concurrently, our discussion on counter projects, ideal cities, and utopia's in relation to Rossi's analogical city was perhaps too brief, and should be expanded on. As for the category of history, the following can be said. Rossi held that the history of architecture, its theories and forms was both the material of design, as well as an index of the history of civilisation. History is thus crucial to all the categories discussed. We will say more of this below.

We should remember that each chapter has been chronologically organised in the following two ways: first, according to the theme that is particular to the chapter; and second, by an overall chronology informed by Rossi's work so that each chapter progresses from 1949 to 1984 in Chapter Seven.

In this concluding chapter, we will first put forward the general conceptual framework that our inquiry has evolved. Then, we will summarise its salient aspects with the purpose of delineating the development of theoretical categories and discuss the relations between them. Thus, while the chapters to this point de-montaged themes and chronologies for the purpose of analysis, in a sense this chapter will be a re-montage, attempting to put the parts into a recognisable whole. We will conclude with *why* this framework has evolved and advance a proposition to understand the analogical city as a political form.

Description and Transformation: A Rossian Conceptual Framework of the City as Architecture

Through the description, classification, production and transformation of architecture's historically determined formal and theoretical conventions, Rossi countered the tendency in the 1960s to study architecture from the point of view of techno-scientific methods of analysis and the quantification of data. Rossi directed his voice to architects asserting both the concreteness of architecture, and architecture's significance as a crucial instrument for a potential social transformation. Therefore, Rossi conceived his architectural production as a contribution to both the collective knowledge of architecture as an autonomous discipline, and also as an intellectual contribution to the social and political struggle of the city. Thus, it is necessary to remember that Rossi attempted to negotiate the problematic relations between the poetics and the politics of architecture. On one hand, the autonomy of architecture, and on the other, architecture's negotiation within the wider societal sphere. The former putting forward architecture's own formal condition as the production and reproduction of architectural forms and theories to provide unified terms of analysis and production. The latter putting forward the potentiality of architecture to question the urban forms and spaces in which we live, the purpose of architecture as a producer of culture, and the significance of architecture as a discipline that provides a socially significant role within culture. In both cases architecture is viewed as a will to knowledge. An architectural knowledge of architecture's own internal formal condition, and simultaneously a knowledge of the societal condition in which specific forms have been actualised because architectural form is always the manifestation of its own particular social, political, and cultural milieu.

Let us state the conceptual framework that we have elucidated so far, which is visualised in the diagram opposite. On one hand, the diagram proposes a framework to understand the key themes in Rossi's theory and practice. On the other, it is a schematic reduction of a great number of complex issues to only these themes so cannot be viewed as a totalising model. Furthermore, as a reduction to only a few key themes, the framework cannot be held as entirely descriptive but selective. We discussed the positioning and repositioning of Rossi's architectural production by different commentators in the Introduction to this thesis, and decided on the major categories to develop further. In this sense, our own subjectivity is embedded in what is stated because what is stated has been influenced by the study of Rossi's themes in the following two ways. First, from the point of view of a non-Italian investigating an historical era and culture not one's own. Second, by reading not only Rossi, but also those others who have interpreted Rossi, and therefore from various points of view, and each with their own subjectivity. Thus, while the themes and relations between them are "Rossian," the themes and relations are also constantly re-positioned and transformed by influences beyond Rossi.

Fig. 8.1.
Fig. 8.2.
Fig. 8.3.
Fig. 8.4.
Fig. 8.5.
Fig. 8.6.

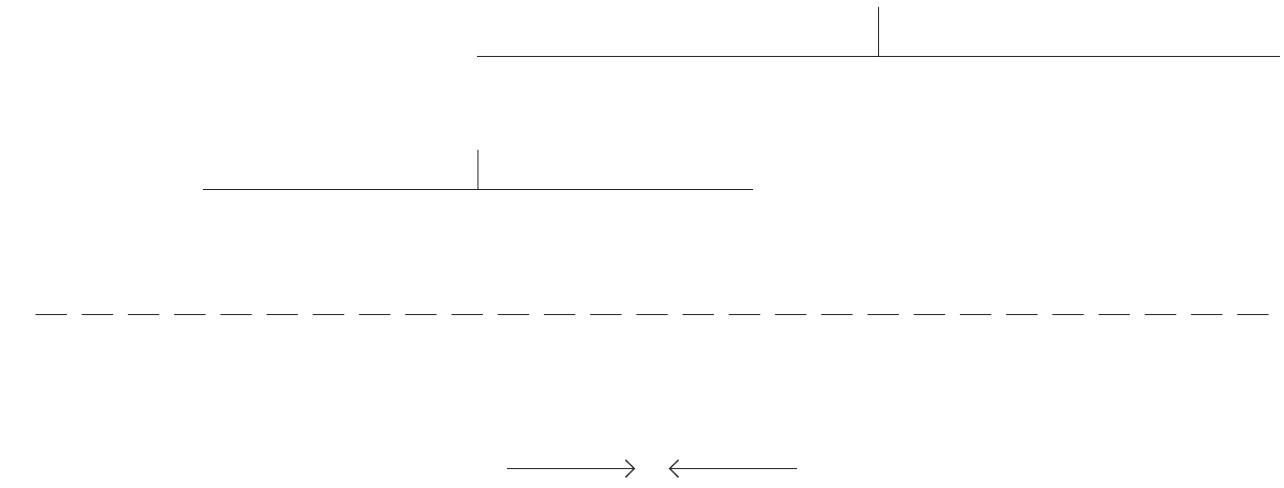
To explain the framework opposite, let us begin with the vertical and the horizontal relation. On the vertical, the city and architecture at the urban scale are held as the final constructed result – the superstructural representation – of historical determined architectural and social relations. As Rossi has said, the history of the city is also the history of civilisation, so the history of architecture is always related to history in general.[4] On one hand, the history of architecture is the history of architectural and urban types, their gradual development and continuous transformation. On the other hand, history as history in general is a continuing sequence of events, always in flux, yet tied to the development of the city by human labour. We could cite such events as the invention of the printing press by Gutenberg in the mid-fifteenth century, and Galileo's discovery in the early seventeenth century that the universe was heliocentric so that the Sun and not Earth was at the centre of the Solar System, or indeed the French Revolution and later the Industrial Revolution's. These events are intensifications within

1. Lewis Mumford, *The Culture Of Cities* (London: Secker & Warburg, 1940), p. 5. First published in 1938.

2. Aldo Rossi, *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), p. 129. Originally published in Italy by Marsilio under the title *L'architettura della città*, 1966.

3. Aldo Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49 (p. 47). First published in 1967. See Aldo Rossi, *Scritti scelti sull'architettura e la città 1956-1972* (Milan: Abitare, 2012). pp. 321-338.

4. See Rossi, *The Architecture of the City*, p. 129.



8.1.

8.1. The history of architecture is always related to history in general, which is the history of civilisation. Architecture is founded simultaneously as a singular event and as the result of collective effort. The conceptual framework above, which should be read with the diagrams on the following page and with the text of this concluding chapter, delineates the fixed theoretical categories that have been the subject and object of our inquiry. They are fixed terms of reference within the architectural production of Aldo Rossi, and the history of architecture. The urgency for fixed terms of reference is crucial within a culture that tends toward continuous distraction.

the realm of thought and action so that history is given a shock, and what once was, is transformed into something different. Yet, history in general is also the collective imagination of the city because the city is a concentration of the population and of capital, of pleasures and of necessities. The city develops according to its people's shared beliefs, the dominant worldview, the events that unfold, and the institutions that govern urban life.

Referring once again to the framework, on the horizontal is a set of relations that mediate between the historical base and its representation. They indicate the interactivity of architecture with the formal, political, social, and historical relations of the city. Again following Rossi and as Mumford says in the statement that frames this chapter, we can say that these relations condition the architecture of the city and architecture as the city conditions these set of relations. Hence, it should be recognised that the framework, although intentionally constituted by fixed categories of architecture, is understood as dynamic in that the characteristics of each category are developed over time because each category also confronts the other categories to produce transformation. Let us describe its parts.

The Idea of Type, Formal Autonomy, and Political Form

As we have outlined, we will follow Rossi and say that architecture and the city are united, and that the city is built over time. Out of the city, urban and architectural types are produced. Rossi said that as the first men built houses for shelter, they built with a character of necessity. Then, the first men built temples as monuments, so they built with a will to aesthetic expression. This corresponds to Rossi's descriptive categories of the dwelling area and the monument as the key formal, spatial, and conceptual dialectic of the city. Formal and spatial because the dwelling area corresponds to the larger part of the urban fabric, and the monument is usually a singular exception to this. Conceptual, because the house is the private sphere of reproduction, and the monument is the public sphere of representation. The notion of representation is here understood as architecture's capacity to formalise prevalent tendencies and ideology, which is always embedded within architecture as Burckhardt reminds us via Rossi: "The question arises: in what way does history speak through art? It does so primarily through architectural monuments, which are the willed expression of power, whether in the name of the State, or of religion."[5] To "State" and "religion," we might also add authorship such as corporate and cultural patronage, dominant class, and the ideology of users as well as creators.

To understand the idea of type, we turned to a number of theoretical and built examples. It was Vitruvius who provided the first known systematic study of architecture as a form of knowledge with its own discernible order, structure, and disciplinary specific language that can therefore be transmitted and developed.[6] A language of both theory and form, so that theoretical vocabulary could describe formal representation. We discussed Alberti, Serlio, and Palladio whose architectural treatise and individual works, although not explicitly conceptualised within a theory of type, are recognisably typological because of their classificatory reasoning, and their formal language based on recognisable typological forms. As we have said, it was not until the Enlightenment that the idea of type was fully theorised. In particular it was Quatremère de Quincy's theory of type that influenced Rossi.

From Quatremère, we discussed the relations between type, model, and character. For Quatremère, character could be divided in the following two ways. On one hand, character referred to the physical and visual. On the other, Quatremère said that character was also moral and intellectual. It can be said that character describes the formal definition of the intellectual condition of any given people, and it is formal definition which links with the idea of type. Yet, for Quatremère, type itself is a category and he contrasted type and model as two different but related guiding concepts in creative production. Quatremère defined type as the idea that a number of works can be produced with variations, but all guided by the same general principle. By contrast, he defined model as a guide for the identical reproducibility of a number of works according to the same principle.

Rossi related the idea of type and the notion of formal autonomy. Formal autonomy proposes that architecture is advanced by its own conventions, theories, built and drawn examples, which are separate and distinct from wider cultural production. These aspects provide architecture with a recognisable language of form, representation, and conceptual vocabulary and were linked by Rossi to the idea of type as outlined above. On one hand, the autonomy argument asserts that architecture has a body of knowledge with its own disciplinary specific language. In order to operate and intervene in the discipline, then it is necessary to understand this language, its foundation, continuity, and transformation. By recognising architecture as a discipline, we recognise architecture as a body of knowledge that is collectively produced within its own specific historical tradition that continues to evolve. The crucial point here is that knowledge is always collectively produced, and not a private pursuit because knowledge relies on social relations such as exchange and dialogue. On the other hand, architecture is part of culture because architecture came into being with the first traces of civilisation and is the formal representation of that civilisation. Architecture engages with clients, patrons, users, publics, institutions, states and governments, which have their own values and beliefs. Thus, architecture confronts the cultural, social and political sphere of the city, where collective values and personal desires are manifest in the architectural form that produces the city. In turn the city produces the subjectivity of its people. Thus, architecture cannot be entirely autonomous, even if at one point it "desired" to be so, as Hays has argued.[7]

Following not only Rossi, but Alberti, de Quincy, Mumford, Burckhardt, and others, we have said many times now that architecture is a human creation and the manifest form of human will. We can understand this as the relation between the formal and the political. We can thus say that autonomy is the meta-category of the formal and the political, where the political is defined as the productive confrontation between peoples, institutions, states and the city, their interaction, general administration, and the subjective moment of decision that turns conflict into coexistence. Arendt has said the following: "The modern individual and his endless conflicts, his inability either to be at home in society or to live outside it altogether, his ever-changing moods and the radical subjectivism of his emotional life, was born in this rebellion of the heart."[8] The internal conflict of the individual is manifest within the collective urban space and form of the city, because it is in the city that the productive confrontation takes place between private and public spheres of life, between people and state, thought and action. In this sense, the city is the built representation of the collective imagination of its people. On one hand, the city makes real the will of an individual personality, patron or client, and the power of the state, government, or institution. On the other, the city represents the collective imagination of its people, their common values and guiding beliefs, individual desires, personal passions and private or more public tragedies. The confrontation between individual will and collective values are framed by architecture and the city. The formal interacts with and confronts the political, so that each is conditioned by the other resulting in the idea of political form. We will connect political form with the idea of type and later the analogical city in the sections that follow.

The City as an Artefact and the Analogical City

As we have explained, in *The Architecture of the City* Rossi put forward a theory of the city as an artefact, proposing theoretical categories such as type, monument, primary element, collective memory, and others in order to describe the different conceptual and formal characteristics of the city. We have also said that Rossi did not propose a comparable theory for the analogical city and as such, there are few definitive theoretical categories that describe the characteristics of the analogical city. Instead, we can find many descriptions, drawings, essays, built and unbuilt projects in which Rossi tests ideas about the analogical city and infers, but stops short of, specific categories for further development. Thus, the analogical city holds a problematic position within the architectural production of Rossi that is neither a fully developed theory, nor is it purely a concept, nor solely a formal principle. If we are to believe Rossi that his concept of the analogical city would be fully theorised in a book called *Analogical City, Essay on Architecture*, as we have already mentioned, then perhaps the analogical city could be compared to his theory of the city as an artefact.[9] As it stands, this is not the case. We need to therefore consider the many ways in which it is possible to define the analogical city.

On one hand the city as an artefact and the analogical city are two different although related ways to study the city. The former dissects every fragment of the city its urban forms and spaces, architectural types, productive forces, and the historical – social and spatial – structure of the city in order to understand the built and unbuilt form of the city over time. The result is a comprehensive but general view of the city. The latter, selects only the

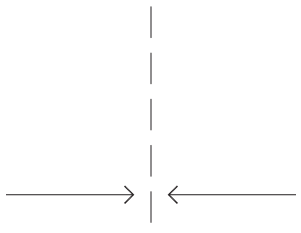
5. Burckhardt quoted by Rossi, *The Architecture of the City*, p. 131.

6. Vitruvius, On Architecture, trans. by Richard Schofield (London: Penguin, 2009). Written c15BC as *De architectura*.

7. See K. Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010).

8. See Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1989), p. 39. First published in 1958.

9. See Jean-Pierre Chupin, *Analogie et théorie en architecture: De la ville, de la ville et la conception, même* (Gollion: Infolio, 2010), p. 147.



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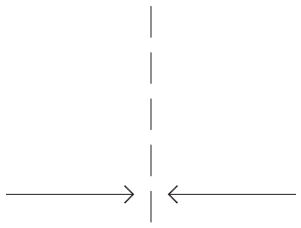

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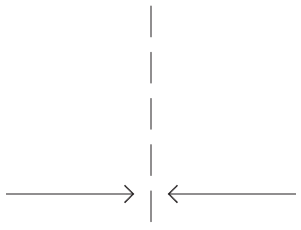

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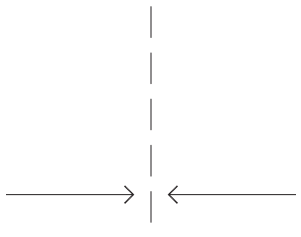

8.5.

8.6.

8.1-8.6. While each theoretical category can be viewed as a fixed term of reference, it is possible to view each category as dialectical so that their characteristics are held in tension, confront each other, become separated or integrated and constantly change. The above diagrams should be read in conjunction with the conceptual framework on the previous page and with the text of this concluding chapter.

key monuments from the city and focuses an analytical gaze on particular instances that might provide an idea of the "emotional nucleus" of the city. Yet, this notion was also present in the city as an artefact, under the category of collective memory, about which we will shortly come to. On the other hand, the city as an artefact and the analogical city can each be considered as the conceptual framework for Rossi's design method. The former proposes that through the generalising framework of type, architecture is produced by using the existing city, its urban forms, spaces, and types to order what is new. The latter puts forward a closer connection between analysis and design so proposes a compositional strategy that hardly distinguishes between what is existing and what is new. Both strategies are related to the theory of type and the visual technique of montage.

While the city as an artefact emphasises rational analysis, the analogical city recognises the irrationality inherent to creative production. Yet, and as we know, neither of these positions can be considered as absolute. In Rossi's concluding remarks to *The Architecture of the City* he states that the city is as irrational as any work of art.[10] Later, he writes that in order to study the irrational it is necessary to take up a rational position.[11] Both the city as an artefact and the analogical city are in different ways analytical apparatuses that frame a creative principle. Let us discuss these relations.

By putting forward the category of artefact to describe the city, Rossi proposed that the city was a product of human labour, embedded with the values of the human condition and produced by mental and manual labour. As the human condition holds aesthetic will, then the city is also a work of art.[12] As Rossi postulates in *The Architecture of the City*, "All great manifestations of social life have in common with the work of art the fact that they are born in unconscious life."[13] This helps us to situate the analogical city in relation to the city as an artefact. As we have rehearsed before, Rossi says the following on the concept of the analogical city:

> The analogous city meant a system of relating the city to established elements from which other artefacts could be derived. At the same time, the suppression of precise boundaries in time and space allowed the design the same kind of tension that we find in memory.
>
> In such an analogous system designs have as much existence as constructed architecture; they are a frame of reference for all that is real.[14]

The first sentence links the analogical city with the city as an artefact and the idea of type. The analogical city provides a conceptual framework that transforms established urban types into new urban types. The second sentence explains that this framework is not limited to the spatial and temporal conventions of the city as a material artefact but with our memory and imagination. Instead, the transformation of architectural types within the framework of the analogical city takes place by turning first toward the past. A past in which an architectural type and all architectural types are discernible, along with all of their transformations over time to that point: a monument, and all monuments; a piazza, and all piazze; built as well as unbuilt, as we read in Rossi's last sentence. On one hand, we can imagine an assemblage. Different architectural types are balanced on top of one another, or adjacent. Think of Rossi's drawings. On the other, architectural types are superimposed as in a montage. Think of the intense search for the conceptual nucleus of any given project.

Let us compare the above statement with the following. "The architectural form of the city is exemplified in its various monuments," Rossi writes, "each of which has its own individuality. They are like dates: first one, then the other; without them we could not understand the passage of time."[15] Each monument manifests a particular moment in the transformation of the city, whether an urban type such as a block, tower, park, street, urban formation, or singular building, each have been produced due to a particular social, political, or economic event in the history of the city. As Rossi writes in the important last section of *The Architecture of the City* entitled "Politics as Choice," Athens, Rome, and Paris are the form of their politics.[16] Think of the boulevards of Haussmann's Paris which are embedded with the tragedy of a displaced collective whose districts were destroyed for the individual will of Napoléon. Yet the boulevard is a type with formal characteristics such as a tree lined and extending perspective, a central path that divides the boulevard lengthways that also extends its breadth, and is enclosed by buildings with regularised fenestration. Such formal characteristics also regulate the subjectivity of those who use the boulevard. The extending perspective links the major monuments of Paris reminding those that live in the city and visit the city of the power of a Paris that builds opera's and rail terminals, museums and commemorative monuments. However, the wide boulevard not only opens the street to light and air, but reduces the possibility of barricades during times of revolt. The boulevard tells us something of the history of Paris at a particular moment in time, when the will to power is also a will to produce form. Hence, collective imagination is embedded in the form of the city.

In the statements we have mentioned, we find that the analogical city is at the same time a compositional framework for the analysis and production of architecture, and that this compositional framework turns to the monuments of the city as the material for transformation. Everything within the analogical city confronts everything else, and everything undergoes a constant process of de-montage and re-montage. Past and present are held in permanent tension, the signs of which are the monument, and the locus.

It is interesting to remember a few statements that Rossi made between the publication of *The Architecture of the City* in 1966 and the first time he put forward the concept of the analogical city in 1969. In "Architecture for Museums," and a year later in the "Introduction to Boullée," Rossi writes of the "subjective element in architecture," in the former and of an "emotional nucleus," in the latter.[17] Let us recall what Rossi said in each essay, beginning with "Architecture for Museums:"

> Although I believe in architecture as a positive event (a real argument) I believe that in the end one finds oneself against something that cannot altogether be rationalised: a great deal of which is the subjective element. The subjective element in architecture has the same tremendous importance it has in politics. Both architecture and politics can be and have to be understood as sciences, but their creative moment is based on decisional elements.[18]

Here, architecture and politics constitute the problem of choice, of decision, and Rossi gives equal weighting to both fields. Next, in the "Introduction to Boullée," Rossi discusses, on one hand the "pure imagination" of Boullée, and on the other, architecture's "inherent technique" based on architectural composition. These two positions, as we have said, referred to the "exalted rationalism" of the former, and the "conventional rationalism" of the latter. In his discussion of exalted rationalism, Rossi asserts the following: "Among things to note are: an emotional nucleus, the construction of a comprehensive image, a technical analysis, the reconstitution of the work."[19] We can say that both the emotional nucleus and the creative moment of decision form the core of what Rossi put forward as the analogical city. Let us also say that inherent to the relation between the emotional nucleus and the moment of decision resides a problematic and irresolvable tension between a will to form and a will to the production of knowledge. The former is individual and the latter is always collective. Yet both constantly overlap.

We can also consider the analogical city as rather more like Rossi's idea of type. The city, as a single artefact built over time, should be understood as a city made up of individual urban artefacts. To study this relationship, we will remember that Rossi put forward the idea of type in the following two ways. First, as a generalising framework for the analysis, classification, and description of the conceptual, formal and historical characteristics of the themes and forms that make up the city. In this sense, type is linked with both the language of form, and the theoretical categories to describe the form of the city as well as the productive relations of the city. Second, Rossi re-positioned the idea of type as a creative principle for the production of architectural form. As a tool for the analysis of the already existing, type is necessarily critical-historical and this aspect is linked with creative production because to understand type as a design method is to always take account of past examples as part of the creative process. As Rossi puts it, "the history of architecture is the material of architecture."[20] In this second sense, type referred to the history of architecture to order what

10. See Rossi, *The Architecture of the City*, pp. 162-163.

11. See Aldo Rossi, 'An Analogical Architecture', *A+U: Architecture and Urbanism*, trans. by David Stewart, 65 (1976), 74–76, (p. 74).

12. See Rossi, *The Architecture of the City*, pp. 32-35.

13. Ibid., p. 33.

14. Aldo Rossi, 'Introduction to the Portuguese Edition of The Architecture of the City' (1971), in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), pp. 169–177, (p. 176).

15. Rossi, *The Architecture of the City*, p. 127.

16. Ibid., p. 162.

17. See Aldo Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, ed. by John O'Regan, trans. by Luigi Beltrandi (London: Architectural Design, 1983), pp. 14–25; Aldo Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49.

18. Rossi, 'Architecture for Museums' (1966), in *Aldo Rossi: Selected Writings and Projects*, p. 16.

19. Rossi, 'Introduction to "Architecture, Essai Sur L'art"', *UCLA Architecture Journal*, 2 (1989), 40–49, (p. 44).

20. Rossi, *The Architecture of the City*, p. 127.

is produced. Yet type always holds a dialectical position with history because it transforms past examples into the present. In Rossi's work, any particular type is generalised to such a degree that its final result is often no more than the formally reduced extrusion of a typological idea. Furthermore, the idea of type is scaleless. It works at the scale of the courtyard as a typological form, and the scale of the gridiron city plan. Yet, Rossi's architectural production not only referred to past historical examples, but critically reflected on Rossi's own built and drawn work. As we have said, Rossi's buildings are part of his own autonomous production, in which each project is in dialogue with its predecessor and its successor, as well as to architecture as a whole.

Let us now consider the analogical city with Rossi's idea of type in mind. Both, as we can now see, are on one hand a framework to study the city, and on the other, a creative principle of production. However, while type proposed a generalising framework, the analogical city proceeds from particular to particular. It is useful to remember Agamben's category of "paradigm," which we have discussed already. Agamben states the following: "A paradigm is a form of knowledge that is neither inductive nor deductive but analogical. It moves from singularity to singularity."[21] To study the city by its architectural and urban types is to study the most common, enduring, and general aspects of the city. Then, to understand their shared logic, and to eventually put forward a particular proposition that is recognisably part of a typological group, yet simultaneously a singular instance of that typological group.

By contrast, a study of the city by analogy is to search for what is particular and singular about the city. The analogue searches for the exceptions – the monuments – isolates them, and studies their exemplarity. The analogue is related to the idea of type because the method of analogy is also one of comparison. Unlike the type, in which the comparative method is at the level of generality, comparison by analogy is particular. For this to be the case, analogy can only compare what it has already seen. This is both the strength of the analogical city and its weakness. On one hand, the analogical city rejects all that is general to seek specific examples. A world of analogy is produced. On the other hand, the world of analogy is formed by knowledge specific to itself and is therefore precariously balanced between introspection and extrospection. The problematic relationship between the desire for self-reflection, and the will to turn this self-reflection into transmittable disciplinary knowledge.

Analogical City and the Category of History as Collective Imagination

Much of our discussion has involved in one sense or another the category of history. As we have discussed in prior chapters, Rossi made use of the "historical method" from two points of view. Let us be reminded of his two positions:

> In the first, the city was seen as a material artefact; a man-made object built over time and retaining the traces of time, even if in a discontinuous way. Studied from this point of view - archaeology, the history of architecture, and the histories of individual cities - the city yields very important information and documentation. Cities become historical texts. ... .
>
> The second point of view sees history as the study of the actual formation and structure of urban artefacts. It is complimentary to the first and directly concerns not only the real structure of the city but also the idea that the city is a synthesis of a series of values. Thus it concerns the collective imagination.[22]

In Rossi's first point, he puts forward the city as a material artefact built over time, and retaining the signs of that time. The city thus accumulates buildings, monuments, and streets, which are material artefacts, the sign of an accrued history that documents the era of the city during which they were built. Rossi then says that the city becomes a text. Like a text, we can read the city, and we can do so by understanding the buildings, monuments, and streets as architectural and urban types produced at a given period in the history of the city. We return here to the idea of type, as we have already said, as an analytical-thematic method for reading the city. It is in this sense that Rossi dissects the city, classifying its buildings and urban forms, and describing them by putting forward theoretical categories.

While the first point deals with manifest form, the surface appearance of the city, the second point is arrived at by going beyond the manifest form, and reading that which is unseen: the values, desires, and passions of a people, their collective imagination, and the human condition that produces the form and life of the city. Thus, while the first point deals with material form, the second point is not material form, but a constellation of relations. These are the social and political relations that we mentioned at the start of this chapter and include architecture's engagement with the following: clients, patrons, users, publics, institutions, states and governments. Architecture makes manifest these relations, values, and beliefs, which become the collective imagination of the city, so that reading the architecture of the city we also read the collectively held values of the city, the prevalent tendencies, and dominant ideology.

Following Rossi's discussion of his dual historical method is his discussion on collective memory, a category, as we have said, that he appropriates from Halbwachs. Rossi puts it thus: "One can say that the city itself is the collective memory of its people, and like memory it is associated with objects and places. The city is the *locus* of the collective memory."[23] Just as Halbwachs said that collective memory is socially constructed within the spatial framework of the "exterior environment," Rossi linked collective memory to the urban forms and spaces of the city, and the forces that produced them. Thus, architectural and urban types become the sign of collective memory because every form and type is the result of the singular formal representation of a collectively constituted event. An event such as a change in industry, economic transformation, political revolution, that result in the production or evolution of urban types, forms, and spaces. Referring to the statement by Burckhardt earlier in which the monument is put forward as an expression of power, then the sign of collective memory is the expression of power through architectural form. The following statement by Rossi comes to mind:

> ... the actual configuration of a large city can be seen as a confrontation of the initiatives of different parties, personalities, and governments. In this way various different plans are superimposed, synthesised, and forgotten, so that the Paris of today is like a composite photograph, one that might be obtained by reproducing the Paris of Louis XIV, Louis XV, Napoleon I, Baron Haussmann in a single image.[24]

Here, Rossi ruminates on the relation between power and its spatialisation in Paris. The various plans for Paris by individuals such as those Rossi names, are the result of particular events within the history of the city, such as the fall of the Bastille under King Louis XVI in 1789, and have a bearing on the form of the city such as Haussmann's boulevard's for Napoleon, so the city develops its memory. Yet, while such expressions of power determine urban form, they are also embedded with the subjectivity of the era. In this respect, it is worthwhile commenting on the Paris of Haussmann, once more.

Between 1853 and 1870, Haussmann was the prefect of Paris whose purpose was to implement plans for the city proposed by Napoléon III.[25] Haussmann transformed the city by cutting boulevards through the urban fabric, widening streets, regularising street frontages, and defining sites for monumental buildings. Museums, railway stations, opera houses, parks, and open squares became singular urban types connected by the boulevard. The modernisation of Paris brought tourists and state visitors, new patrons, and a bourgeois dominated urban culture. On one hand, improvements were made to infrastructure, transport, and the overall aesthetic appearance of the city. On the other hand, the boulevards cut through workers housing, therefore displacing residents, were widened to reduce the possibility of barricades and made direct connections between workers districts to army barracks and police stations. By making links to these institutions of control, any sudden revolt could be quickly and efficiently controlled. Thus, Haussmann's boulevard can be viewed as an urban type developed within a specific social and political climate within the history of the city, and at the same time an urban type that embodies the subjectivity of those whose life was in some way altered, affected, controlled or displaced. Haussmann's boulevard's are one instance of the representation of power relations inherent to an urban type used to subjectify its citizens through a rhetoric of aesthetic improvement, underlined by communication, control and surveillance.

There are two categories that are crucial to Rossi's idea of collective memory. The first is the monument because the monument concretises the underlying power relations of the city. The second is the category of locus, which we can put forward as the formal inverse of the monument. The monument can be defined as a singular urban type belonging to what can be notionally called the public sphere of the city. The locus, while related to the monument because like the monument the locus embodies power relations and collective

21. Giorgio Agamben, 'What Is a Paradigm?', in *The Signature of All Things: On Method*, trans. by Kevin Attell and Luca D'Isanto (New York: Zone Books, 2009), p. 31.

22. Rossi, *The Architecture of the City*, p. 128.

23. Ibid., p. 130.

24. Ibid., p. 142.

25. See the discussion in Philippe Panerai et al., 'Haussmannien Paris: 1853-82', in *Urban Forms: The Death and Life of the Urban Block*, trans. by Olga Vitale Samuels (Oxford: Architectural Press, 2004), pp. 1–29. First published in 1997 in French entitled *Formes urbaines, de l''ilot urbain à la barre*.

subjectivity, yet is different in the following respect: that the locus defines a space of potential presence. We can be reminded here of the agora as the locus of the Greek city, the boulevard of Paris, the piazza of the Italian city. Each example manifesting not only a singular idea we have of Athens, Paris, or Rome, but also the conceptual and formal space in which transformation of the city can be made possible.

In Rossi's discussion on the value of history understood as collective memory, he ends with a study of Athens. For Rossi, Athens embodies the transition of nature to culture. He writes the following: "Thus the memory of the city ultimately makes its way back to Greece; there urban artefacts coincide with the development of thought, and imagination becomes history and experience."[26] Rossi implies that the idea of any and all cities can be traced to the Greek city as the foundation of culture and of civilisation. As we have said, the Greek city was composed by the following spatially and formally differentiated aspects: the Acropolis with its temples for the Gods and state residences; the Agora surrounded by temples as quasi-secular, public, and political buildings; and surrounded by private residential areas. We get a triad of Acropolis, agora, and dwelling area. Each of which are spatially separate, yet at the same time are in confrontation with each other, and this confrontation is focused on the open space of the agora. As we have said, the Agora was neither entirely public, symbolic, nor political, but was the space in which these aspects confronted one another. If we are to believe Rossi that all cities in some sense refer to the Greek city, then we need to also believe that all cities and the architecture that produces the city, are rooted in our collective imagination that extends from the agora of the polis.

It is productive to recall Freud and Benjamin on the related concepts of memory and history. In the opening chapter of *Civilisation and Its Discontents* Freud revisits the theme of memory and describes how Rome, the Eternal City, has evolved over time.[27] Originating on the Palatine Hill as an enclosed settlement, the *Roma quadrata* settlements followed on separate hills, then the city was bounded by the Servian Wall and later transformed by Caesar and Emperor Aurelian. Freud writes that a modern visitor to Rome might encounter the old city, but buried under modern buildings. With excavations the visitor might find partial views of ruins that have replaced older buildings where the temples of an historical period once stood. Freud writes that they are "scattered fragments" buried under the modern city that has grown up in the centuries since the Renaissance. Freud continues with the following:

> Now let us, by a flight of imagination, suppose that Rome is not a human habitation but a psychical entity with a similarly long and copious past - an entity, that is to say, in which nothing that has once come into existence will have passed away and all the earlier phases of development continue to exist alongside the latest one.[28]

In this statement, Freud raises the problem of how the mind retains material. However, Freud turns to the outside, and so to the socialised super-ego of civilisation, and puts forward Rome as an analogue of the unconscious. To continue the analogy between Rome and the unconscious, the Aurelian and Servian walls would coexist; palazzo's and temple's could be viewed in their original form, and also in every subsequent form they assumed in later phases of the city, from Etruscan, Imperial, Medieval, and Renaissance to today. All would be experienced simultaneously. As Freud says, "the observer would perhaps only have to change the direction of his glance or his position in order to call up the one view or the other."[29] Freud writes that in mental life, nothing that has once existed is ever lost. Everything that has been seen is internalised, where it is retained by the unconscious, and every memory is superimposed and continuously worked over. On this point, we can be reminded of our earlier discussion on Rossi describing the development of Paris as a confrontation of the different initiatives, parties, personalities, and governments, superimposed like in a photomontage. Or alternatively, the Canaletto painting that Rossi put forward as an example of the analogical city. Venice and Vicenza were superimposed and one city is built on the other.

Let us turn to Benjamin's concept of history. In "Thesis XVII" of his "Theses on the Philosophy of History," Benjamin writes the following:

> Universal history has no theoretical armature. Its method is additive; it musters a mass of data to fill the homogeneous, empty time. Materialistic historiography, on the other hand, is based on a constructive principle. Thinking involves not only the flow of thoughts, but their arrest as well. Where thinking suddenly stops in a configuration pregnant with tensions, it gives that configuration a shock, by which it crystallizes into a monad.[30]

In this statement, universal history is countered by materialistic historiography. The former stands for the accumulation of history from event to event, and as a sequence of thoughts. The latter is not sequential, but condenses the events, thoughts, and all of history into a single instant. An instant in which tensions and contradictions are momentarily crystallised into a monad, a crystal of history. In this sense we can rotate the impenetrable "crystal" that is history and see history from a number of viewpoints. Benjamin continues thus:

> A historical materialist approaches a historical subject only where he encounters it as a monad. In this structure he recognises the sign of the Messianic cessation of happening, or, put differently, a revolutionary chance in the fight for the oppressed past. He takes cognizance of it in order to blast a specific era out of the homogeneous course of history - blasting a specific life out of the era or a specific work out of the lifework.[31]

Now, the crystal of history is given a shock, blasted apart and in doing so, we can recognise the specificity of any given life, work, or era, its structure, and its "oppressed past." With this principle, the destructive principle, we can penetrate beyond the surface and into the depths of history and of thought. In this sense, we see not only the surface as it has been constructed, but the relations that have given rise to the surface appearance – the superstructural representation. The destructive principle is not the opposite of the constructive principle mentioned in Benjamin's first statement. Both are necessary and reciprocal because it is only through the destruction of the crystal of history that we can view beyond the false smoothness of the monad. After the destruction of the crystal of history, we can examine the "oppressed past," its contradictions, complexities, and tensions with a view to understanding how the present has been historically determined and make another construction. "Thesis XVII" ends thus:

> As a result of this method the lifework is preserved in this work and at the same time cancelled; in the lifework, the era; and in the era, the entire course of history. The nourishing fruit of the historically understood contains time as a precious but tasteless seed.[32]

In this last statement, the dialectic of destruction and construction is on one hand synthesised so that the crystal of history both preserves and cancels the life of an era. In this case, the dynamic forces of history are held in tension, static. On the other hand, Benjamin asserts the following sequence: lifework, era, and the entirety of history. Thus, crystallisation of the lifework of history is only momentary, because history is always dynamic and moves forward, transformed. Yet the repressed past is not rejected, not edited out, but made clear.

Let us end this section by proposing that the lifework of Benjamin's crystal of history is comparable to the emotional nucleus of the analogical city. An emotional nucleus that is on one hand the subjective element of the individual. On the other, related to the collective imagination. The collective imagination is not individual but connected to the external social and political reference system of language and history. Language allows us to enter into history because language is a common human faculty.[33] Language is an intellectual and representational system of spoken words and conceptual vocabulary. It is part

26. Rossi, *The Architecture of the City*, p. 134.

27. See Sigmund Freud, *Civilization and Its Discontents* (1930), trans. by James Strachey (New York: Norton & Company, 1961); and Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud: The Future of an Illusion, Civilization and Its Discontents, and Other Works* (1927-1931), trans. by Anna Freud and James Strachey (London: Hogarth, 1961), Vol 21. Eisenman quotes the following passage from Freud's *Civilization and Its Discontents* in his "Editor's Introduction" to the English translation of *The Architecture of the City*: "Now let us ... suppose that Rome is not a human habitation but a psychical entity with a similarly long and copious past - an entity, that is to say, in which nothing that has once come into existence will have passed away and all the earlier phases of development continue to exist alongside the latest one... . If we want to represent historical sequence in spatial terms we can only do it by juxtaposition in space: the same space cannot have two different contents. ... It shows us how far we are from mastering the characteristics of mental life by representing them in pictorial terms." See Peter Eisenman, 'The Houses of Memory: The Texts of Analogy', in *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982), pp. 2–11, (p. 4). Also see K. Michael Hays, *Architecture's Desire: Reading the Late Avant-Garde* (Cambridge, Mass.: MIT Press, 2010), p. 33. Hays writes: "... the City is something very like an architectural unconscious - the Other as both embodiment of the social substance and the site of the unconscious."

28. Sigmund Freud, *Civilization and Its Discontents* (1930), trans. by James Strachey (New York: Norton & Company, 1961), p. 17.

29. Ibid., p. 17.

30. Walter Benjamin, 'Theses on the Philosophy of History' (1940), in *Illuminations*, ed. by Hannah Arendt, trans. by Harry Zohn (London: Fontana Press, 1992), pp. 245–255, (p. 254).

31. Benjamin, 'Theses on the Philosophy of History (1940)', in *Illuminations*, p. 254.

32. Ibid., p. 254.

33. See Christian Marazzi, *Capital and Affects: The Politics of the Language Economy*, trans. by Giuseppina Mecchia (Los Angeles, CA: Semiotext(e), 2011), p. 38. First published in Italy in 1994.

of the collective imagination because all of us have the generic human capacity to learn, reflect, communicate, and imagine. Yet, language is also a language of architectural form, and of how architectural form is an expression of power. We are once again reminded of Burckhardt's statement in which he says that history speaks through architectural monuments. Just as a common language of words and sentences are actualised in particular moments of speech, a common language of forms are actualised in architectural types and specific monuments in the city. Considered in this way, the emotional nucleus of the analogical city is the historically conditioned collective imagination.

The Apparatus of Imagination and the Analogical City as Political Form

To conclude this dissertation we can discuss the relationship between potentiality and actuality inherent to Rossi's concept of the analogical city, reading this "potentiality" as political form. In the analogical city, as in the city as an artefact, the historical, formal, and spatial aspects of the city are crucial. However, in the analogical city these aspects are freed from the limitations of the actual city, and instead the notion of collective imagination is emphasised. Within the imagination, anything can happen because the imagination is pure potentiality. In *A Grammar of the Multitude* Virno says the following: "*General intellect* should not necessarily mean the aggregate of the knowledge acquired by the species, but the *faculty* of thinking; potential as such, not its countless particular realisations."[34] Here, Virno emphasises the value of the generic human faculty of thinking. Virno follows Marx, whom, in the *Grundrisse*, reminds us of both our manual ability and mental capacity: "The use value which the worker has to offer to the capitalist, which he has to offer to others in general, is not materialised in a product, does not exist apart from him at all, thus exists not really, but only in potentiality, as his capacity."[35] Thus, "potential" is distinct from any "particular realisation." The former stands for aptitude, capacity, and ability.[36] Potential is thus non-presence, non-real, non-current. Potential is not a particular realisation, but the *capacity* to produce that realisation.

Let us remember a few of the examples Rossi proposed to illuminate the analogical city. In the Canaletto painting, Palladio's buildings from Vicenza are transposed to the Rialto Bridge site in Venice, along with Palladio's own proposal for the Rialto Bridge. We can be reminded of a statement on analogy by Agamben from the essay "What is a Paradigm?" in which Agamben says the following: "Against the drastic alternative 'A or B,' which excludes the third, analogy imposes its *tertium datur*, its stubborn 'neither A nor B.'"[37] Here, Agamben puts forward negation as a characteristic of the analogue. With this in mind we can interpret the Canaletto painting as both a non-Venice, because the buildings are from Vicenza, and as a non-Vicenza, because the site is recognisably the Rialto in Venice. It is through the negation of each city that we arrive at the potentiality of another city. An analogous city that is neither Vicenza, nor Venice, but a city that exists as pure potentiality, distinct from its particular realisation, its actuality.

Rossi's discussion of the Canaletto painting as an analogical city is notable for one further aspect. "These two terms, analysis and design," Rossi writes, "seem to me to be coalescing into one fundamental area of study, in which the study of urban artefacts and of form becomes architecture."[38] If we continue with the concept of analogy as negation and follow Rossi in the above statement then we can say that the analogical city represents neither analysis, nor design. Instead, the analogical city counters both analysis and design. It is the potential for something else. Something that is non-present, non-real, and non-current, so proposes an alternative. The analogical city thus proposes a potential future presence that is alternative to the current presence.

We can read this in Rossi's *Analogical City* collage panel, in which Rossi's thinking is not an invisible activity but becomes something exterior. Subjecting the current city to critique, countering the real city by juxtaposing and superimposing canonical works, anonymous architecture, built, unbuilt, and his own collaborative projects, the analogical city goes beyond the design of new urban forms and spaces. Instead Rossi, as in other projects, uses a limited vocabulary of forms to assert the role of architecture as an instrument of criticism. The analogical city is a way to question the urban forms and spaces that have been produced already and in which we currently live.

Although Rossi does not say it in precisely these terms, the analogical city puts forward the human capacity to imagine, and the generic capacity for all human beings to produce. The analogical city asserts the potentiality inherent to all humans. When Rossi inserts the shadowy figure into the centre of his collage, then we can say that at the centre of the analogical city is the mind of the individual, the collective imagination of the city, and the emotional nucleus of life itself. It is interesting to remember that Rossi infers this in *A Scientific Autobiography* when he makes the following comparison between architectural types and the spheres of life: "... since while I may talk about a school, a cemetery, a theatre, it is more correct to say that I talk about life, death, imagination."[39] While the city as an artefact is the locus of collective memory, the analogical city is the emotional nucleus of imagination. Rossi's analogical city reminds us of the potentiality of the human mind for thinking and feeling, remembering and imagining, and projecting the potential for an alternative future presence. A presence that is counter to the prevalent tendency, alternative to what is current, and a view that something else is always possible.

This dissertation had two lines of inquiry. One that interrogated the formal and theoretical production of Aldo Rossi in particular and another that supported the discussion of Rossi's work by referring to the broader discipline of architecture. We found contradictory formal and theoretical relations in Rossi's architectural production and attempted to show some of the ways in which these relations coexist, become momentarily resolved, only to be re-framed and continuously transformed. It is for this reason; the unstable resolution of Rossi's theory of the city, type, autonomy, history, and the analogical city; that we can re-think each category, question their purpose, and build on them in order to sharpen our awareness of architecture itself as a form of knowledge. A form of knowledge that goes beyond the art, craft, or technical construction of building. A knowledge that is necessarily historically conditioned and thus inherently collectively produced.

Hence, our claim is to build on both the knowledge of a major figure within the history of architecture, and also to build on broader disciplinary knowledge in order to bring into relief the present quality of architecture as a discipline. A discipline that has, since the 1980s, been humiliated time and again by a distracting mixture of architecture's cultural commodification within the art gallery, the production of exuberant single buildings or austere private homes, a technological-economic attitude to urban analysis, the withdrawal of architecture from public discussion, and recently the aestheticisation of economic austerity that seems to normalise the condition of scarcity. In effect this reveals the precarity of both the discipline of architecture and of urban life in general. The present ethos, which seeks to measure and control knowledge by technological and economic apparatuses such as algorithmic formulations, performance indexes, matrices linked to markets, has led commentators to describe our present modernity, and as we have said, as a crisis of social imagination. We should remember that architecture is distinguished as a discipline that conceptualises a specific field of reality, and that reality is architecture itself. Architecture is a discipline that develops a specific knowledge that includes theories of form and space, built and theoretical examples, design and building techniques, which are continuously reframed and critically appraised through architecture's self-reflective nature to transform and develop the discipline. It is with a sense of urgency that we should re-assert architectural production as the production of disciplinary knowledge because the actualisation of this knowledge gives form to human values, shared beliefs, and the collective imagination, which is a sensibility that cannot be reduced to information contained by techno-economic apparatuses. Yet, we need to recognise that to produce knowledge in architecture is to negotiate architecture's own formal condition as well as its societal role, and that this relationship is embedded with ideology. By giving form to urban life, architecture puts forward a social direction based on prevalent tendencies. When the tendency advocates economic and private interest over cultural and collective values, this ethos is made real through architecture.

Finally, Rossi ended *The Architecture of the City* with a discussion on the economic forces that produce the city and contrasted this with the political as the "decisive moment" of architecture and the city. The economic and the political are dialectical forces and within our current condition it is the former that dominates. How can we make the architecture of the city political again? What alternative ways can the architect negotiate a critique of this condition, recognising that architectural production is complicit within current neoliberal ideology? In what ways can we challenge the commodification and exploitation of the architectural imagination to re-assert disciplinary significance?

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34. Paolo Virno, *A Grammar of the Multitude: For an Analysis of Contemporary Forms of Life*, trans. by Isabella Bertoletti, James Cascaito, and Andrea Casson (Los Angeles, CA: Semiotext(e), 2004), p. 66. Italics are Virno's.

35. See Karl Marx, *Grundrisse: Foundations of the Critique of Political Economy (Rough Draft)*, trans. by Martin Nicolaus (Harmondsworth: Penguin Books, 1973), p. 267.

36. For a discussion on these relations see Virno, *A Grammar of the Multitude*, p. 81-84.

37. Agamben, 'What Is a Paradigm?', in *The Signature of All Things*, pp. 19-20.

38. Aldo Rossi, 'Preface to the Second Italian Edition (1969)', in *The Architecture of the City*, trans. by Diane Ghirardo and Joan Ockman (Cambridge, Mass.: MIT Press, 1982), pp. 164–167, (p. 166).

39. Aldo Rossi, *A Scientific Autobiography*, trans. by Lawrence Venuti (Cambridge, Mass.: MIT Press, 1981), p. 78.

LIST OF ILLUSTRATIONS

CHAPTER 1. INTRODUCTION

1.1. Roberto Rossellini, *Paisà*, 1946. Screenshot by author.
1.2. Ludovico Quaroni and Mario Ridolfi, Tiburtino housing, Rome, 1949-54. Photo Savio. Reproduced from Manfredo Tafuri, *History of Italian Architecture, 1944-1985* (Cambridge, Mass.: MIT Press, 1989).
1.3. Luigi Carlo Daneri, Quartiere Forte di Quezzi, Genoa, 1956-61. Photo Leoni, F., Genoa. Reproduced from Manfredo Tafuri and Francesco Dal Co, *Modern Architecture Vol. 2* (London: Faber & Faber/Electa, 1986).
1.4. Michelangelo Antonioni, *Il deserto rosso*, 1964. Screenshot by author.
1.5. Andrea Branzi, *For a Non-Figurative Architecture*, 1968. Credit Centre Georges Pompidou Archive, Paris. Reproduced from Andrea Branzi, *Weak and Diffuse Modernity: The World of Projects at the Beginning of the 21st Century* (Milan; London: Skira, 2006).

CHAPTER 2. HISTORY DISINTEGRATES INTO IMAGES, I

2.1. Sebastiano Serlio, Drawings of grids from *Book I On Geometry*, 1545. Reproduced from Sebastiano Serlio, *The Five Books of Architecture: An Unabridged Reprint of the English Edition of 1611* (New York; London: Dover, 1982).
2.2. Jean N. L. Durand, *Building ensembles resulting from the combination of different horizontal and vertical elements*, 1802-05. Reproduced from Jean-Nicolas-Louis Durand, *Précis Des Leçons D'architecture Données À l'Ecole Royale Polytechnique (1802-1805)* (Paris: Uhl, 1985).
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2.4. Auguste Choisy, *Palace in Amman (Syria)*. Reproduced from Le Corbusier, *Towards a New Architecture* (New York: Dover Publications, 1986).
2.5. Auguste Choisy, *Temple at Thebes*. Reproduced from Le Corbusier, *Towards a New Architecture* (New York: Dover Publications, 1986).
2.6. Le Corbusier, *Vers une architecture*, 1923. Page spread reproduced from Le Corbusier, *Towards a New Architecture* (New York: Dover Publications, 1986).
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2.8. John Heartfield, *A Pan-German*, 1933. Photo Akademie der Künste der DDR, Berlin. Reproduced from Dawn Ades, *Photomontage* (London: Thames and Hudson, 1996).
2.9. Aldo Rossi, *Composizione n. 3*, 1968. Reproduced from Aldo Rossi, *Aldo Rossi, Projects and Drawings, 1962-1979* (Florence: Rizzoli, 1979).
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2.11. Ludwig Mies van der Rohe, *Project for a Concert Hall*, 1942. Reproduced from Philip Johnson, *Mies van Der Rohe* (London: Secker & Warburg, 1978).
2.12. Ludwig Hilberseimer, *Perspective rendering of entry for the Chicago Tribune competition*, 1922. Credit The Art Institute of Chicago. Reproduced from Richard Pommer, David Spaeth and Kevin Harrington, *In the Shadow of Mies: Ludwig Hilberseimer Architect, Educator, and Urban Planner* (Chicago, Ill.: Art Institute of Chicago with Rizzoli International Publications, 1988).
2.13. Andrea Branzi, *For a Non-Figurative Architecture*, 1968. Credit Centre Georges Pompidou Archive, Paris. Reproduced from Andrea Branzi, *Weak and Diffuse Modernity: The World of Projects at the Beginning of the 21st Century* (Milan; London: Skira, 2006).
2.14. Aldo Rossi, *Studio px l'architecture assassinée*, 1974. Credit Studio di Architettura. Reproduced from Aldo Rossi, *Aldo Rossi: Drawings and Paintings* (New York: Princeton Architectural Press, 1993).
2.15. George Grosz, *My Germany*, 1920. Reproduced from Dawn Ades, *Photomontage* (London: Thames and Hudson, 1996).
2.16. Mario Sironi, *Urban Landscape*, 1920-21. Reproduced from Emily Braun, *Mario Sironi and Italian Modernism: Art and Politics under Fascism* (Cambridge: Cambridge University Press, 2000).
2.17. Max Ernst, *Each bloody riot will help her to live in grace and truth.* Reproduced from Max Ernst, *The Hundred Headless Woman (La Femme 100 Têtes)*. (New York: George Braziller, 1981).
2.18. Cameron McEwan, *Selection and isolation of a particular example. Methodology diagram*, 2013.
2.19. Cameron McEwan, *Conceptual grid of examples. Methodology diagram*, 2013.
2.20. Cameron McEwan, *Analogical City as Conceptual Grid of Examples. Methodology diagram*, 2013.
2.21. Cameron McEwan, *Meta-theoretical Framework. Methodology diagram*, 2013.
2.22. Cameron McEwan, *Sketch studies of development of conceptual frameworks*, 2013.

CHAPTER 3. HISTORY DISINTEGRATES INTO IMAGES, II

3.1. Francesco di Giorgio, 1482. Credit Cod. Magliab., Bibl. Naz., Florence. Reproduced from Rudolf Wittkower, *Architectural Principles in the Age of Humanism* (London: Academy Editions, 1973).
3.2. Aldo Rossi, *Interior*, 1975. Credit Studio di Architettura. Reproduced from Aldo Rossi, *Aldo Rossi: Drawings and Paintings* (New York: Princeton Architectural Press, 1993).
3.3. Luca Signorelli, *Resurrection of the Dead*, 1499-1504. Photo Alinari, Anderson, Brogi (Florence). Reproduced from Frederick Hartt and David G. Wilkins, *History of Italian Renaissance Art* (London: Thames & Hudson, 1994).
3.4. Sigmund Freud, *Forgetting of Proper Names*, 1901. Reproduced from Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud: The Psychopathology of Everyday Life (1901)*. (London: Hogarth, 1960).
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3.6. Andrea Mantegna, *Lamentation over the Dead Christ*, 1466. Credit Brera Gallery, Milan. Reproduced from Frederick Hartt and David G. Wilkins, *History of Italian Renaissance Art* (London: Thames & Hudson, 1994).

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CHAPTER 4. THE ARCHITECTURE OF THE CITY

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4.2. Gianni Braghieri, *The Sacri Monti.* Photo Braghieri. Reproduced from Aldo Rossi, *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981).
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4.10. Belgioioso, Peressutti, Rogers, *Torre Velasca seen from the Duomo, Milan*, 1956-58. Photo Istituto di Storia dell'Architettura, IUAV, Venice. Reproduced from Manfredo Tafuri and Francesco Dal Co, *Modern Architecture Vol. 2* (London: Faber & Faber/Electa, 1986).
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4.14. Aldo Rossi, *Conceptual sketch for Locomotiva 2 Centro Direzionale, Turin*, 1962. Credit Fondazione Aldo Rossi, Milan. Reproduced from Brett Steele and Francisco González de Canales, eds., *First Works: Emerging Architectural Experimentation of the 1960s and 1970s* (London: Architectural Association, 2009).
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4.22. AUA (V. Quilici, G. Piccinato, E. Fattinanzi, M. Tafuri), *City-territory project for Pontine district, Rome*, c1960. Reproduced from Pier Vittorio Aureli, *The Project of Autonomy: Politics and Architecture within and Against Capitalism* (New York: Princeton Architectural Press, 2013).
4.23. Kevin Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 1960). Front cover.
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4.26. Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982). Front cover.
4.27. Aldo Rossi, *Houses on a canal, Milan*. Photo Aldo Rossi. Reproduced from Aldo Rossi, *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981).
4.28. Leon Battista Alberti, *Sant'Andrea, Mantua*, 1470. Photo Gianni Braghieri. Reproduced from Aldo Rossi, *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981).
4.29. Cameron McEwan, *The Architecture of the City Conceptual Framework*, 2013.
4.30. Roberto Freno, *Courtyard in Seville*. Photo Freno. Reproduced from Aldo Rossi, *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981).
4.31. Leon Battista Alberti, *Sant'Andrea, Mantua*, 1470. Photo Gianni Braghieri. Reproduced from Aldo Rossi, *A Scientific Autobiography* (Cambridge, Mass.: MIT Press, 1981).
4.32. Palazzo della Ragione, Padua, c1219. Photo Giulio Dubbini. Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.33. Palazzo della Ragione, Padua, c1219. Credit Raccolta Bertarelli, Milan (above).; Collection Museo Civico, Padua (below). Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.34. Palazzo della Ragione, Padua, c1219. Photo Giulio Dubbini. Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.35. Plan of Athens, c5BC. From Benevelo (1975). and reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.36. Restored plan of Athens Agora, c2BC. Credit Agora Excavations, Athens. Reproduced from Arnold Walter Lawrence, *Greek Architecture* (New Haven: Yale University Press, 1996).
4.37. Pope Sixtus V, *Project for the transformation of the Coliseum in Rome into a wool factory*, 1590. Credit from a collection of engravings published by Alberts (1724), Raccolta Bertarelli. Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
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Press, 1982).
4.39. G. Niemann, *Reconstructed plan of Diocletian's Palace, Split*, 1910. Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.40. L. F. Cassas, Engraved plan of split, 1802. From *Cassas Voyage pittoresque et historique de l'Istrie et de la Dalmatie* (Paris, 1802). Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.41. Plan of Paris, c1850. Credit Pier Vittorio Aureli, from The Theology of Tabula Rasa.
4.42. Gustave Caillbotte, *A Balcony, Boulevard Haussmann*, 1880. Reproduced from Kirk Varnedoe, *Gustave Caillebotte* (New Haven: Yale University Press, 1987).
4.43. L. and P. Giarré, *View of the Sacro Monte at Varese, Italy*, 1845. Credit Raccolta Bertarelli. Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
4.44. Plans of Turin. Reproduced from Charles Graves, *The Genealogy of Cities* (Kent, Ohio; London: Kent State University Press, 2008).
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4.46. Cameron McEwan, *Rossi's Idea of Type Conceptual Framework*, 2013.

CHAPTER 5. TYPOLOGY

5.1. Cameron McEwan, *Conceptual Framework for the Idea of Type*, 2013.
5.2. Rudolf Wittkower, *Centralised plans, from Serlio's fifth book on Architecture*, 1547. Reproduced from Rudolf Wittkower, *Architectural Principles in the Age of Humanism* (London: Academy Editions, 1973).
5.3. Nikolaus Pevsner, *A History of Building Types* (Princeton, N.J.: Princeton University Press, 1997). Table of contents.
5.4. Rudolf Wittkower, *Schematized plans of eleven of Palladio's Villas.* Reproduced from Rudolf Wittkower, *Architectural Principles in the Age of Humanism* (London: Academy Editions, 1973).
5.5. Aldo Rossi, *Typological-schema*, 1970. Reproduced from Aldo Rossi, 'Due Progetti', *Lotus International*, 7 (1970).
5.6. Cameron McEwan, *Conceptual Framework for de Quincy on "type" and "model,"* 2012.
5.7. Cameron McEwan, *Conceptual Framework for de Quincy on "character,"* 2012.
5.8. Jean-Nicolas-Louis Durand, *Drawing of Santa Costanza, Rome*, 4AD. Credit Heidelberger historische Bestände - digital: Bücher zur Architektur und Gartenkunst. Reproduced from Jean-Nicolas-Louis Durand, *Recueil et parallèle des édifices anciens et moderne de tout genre* (Paris: Gillé, 1801).
5.9. Donato Bramante, *Tempietto*, 1502. Redrawn by Palladio, 1570. Reproduced from Andrea Palladio, *The Four Books on Architecture* (Cambridge, Mass.: MIT Press, 2002).
5.10. Pantheon, Rome, c126AD. Redrawn by Serlio, 1540. Reproduced from Sebastiano Serlio, *The Five Books of Architecture: An Unabridged Reprint of the English Edition of 1611* (New York; London: Dover, 1982).
5.11. Pantheon. Redrawn by Palladio, 1570. Reproduced from Andrea Palladio, *The Four Books on Architecture* (Cambridge, Mass.: MIT Press, 2002).
5.12. Aldo Rossi, Gallaratese housing, 1970-73. Reproduced from Aldo Rossi, 'Due Progetti', *Lotus International*, 7 (1970).
5.13. Roberto Freno, *"Alley of the Washerwomen," between Corso San Gottardo and the Naviglio canal, Milan.* Photo Freno. Reproduced from Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: MIT Press, 1982).
5.14. Cameron McEwan, *Gallaratese*, 2011.
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5.18. Cameron McEwan, *Courtyard of Fagnano Olona School*, 2011.
5.19. Vitruvius, *Ten Scrolls of De architectura*, c15BC. Reconstruction by Indra Kagis McEwen. Photo Marianne McEwen. Reproduced from Indra Kagis McEwen, *Vitruvius: Writing the Body of Architecture* (Cambridge, Mass.: MIT Press, 2003).
5.20. Reconstructed facade of the Temple of Augustus in Pisidian Antioch, dedicated 2 BC. Credit Kelsey Museum of Archaeology archive, Ann Arbor, Michigan. Reproduced from Indra Kagis McEwen, *Vitruvius: Writing the Body of Architecture* (Cambridge, Mass.: MIT Press, 2003).
5.21. Vincenzo Scamozzi, *Plan of an Ideal City*, 1615. Credit Bildarchiv Preussuscher Kulturbesitz, Berlin. Reproduced from Bernd Evers and Christof Thoenes, *Architectural Theory: From the Renaissance to the Present* (Köln: Taschen, 2003).
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5.26. Andrea Palladio, *Forum and other buildings*, 1567. Reproduced from Vitruvius, *On Architecture* (London: Penguin, 2009).
5.27. Andrea Palladio, *Plan of a Roman urban house*, 1567. Reproduced from Vitruvius, *On Architecture* (London: Penguin, 2009).
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5.30. Ildefons Cerdà, *Extension of Barcelona*, 1859. Reproduced from Pier Vittorio Aureli, *The Possibility of an Absolute Architecture* (Cambridge, Mass.: MIT Press, 2011).
5.31. Frontispiece to Marc-Antoine Laugier, *Essai sur L'architecture*, 1753. Reproduced from Marc-Antoine Laugier, *An Essay on Architecture* (Los Angeles: Hennessey & Ingalls, 1977).
5.32. Giovanni Battista Piranesi, *Carceri* Plate VII (first state), etching, 1750. In G. Piranesi, Carceri d'invenzione. Reproduced from Manfredo Tafuri, *The Sphere and the Labyrinth: Avant-Gardes and Architecture from Piranesi to the 1970s* (Cambridge, Mass.: MIT Press, 1990).
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5.39. Albert Kahn, *Highland Park Ford Plant*, 1913-1915. Credit The Jalopy Journal.
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CHAPTER 6. AUTONOMY

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6.2. Sebastiano Serlio, Tragic Scene, 1537. Reproduced from Sebastiano Serlio, *The Five Books of Architecture: An Unabridged Reprint of the English Edition of 1611* (New York; London: Dover, 1982).
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CHAPTER 8. CONCLUSION

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